Commonwealth of Pennsylvania

Department of Agriculture

BUREAU OF CHEMISTRY

BULLETIN NO. 301

Fertilizer Report

January 1 to July 31, 1917

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Chief Chemist

Published by Direction of the Secretary of Agriculture,
CHARLES E. PATTON

HARRISBURG, PENNA.:
J. L. L. KUHN, PRINTER TO THE COMMONWEALTH
1917.

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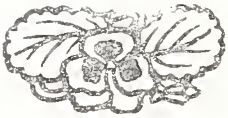

LETTER OF TRANSMITTAL.

DEPARTMENT OF AGRICULTURE
BUREAU OF CHEMISTRY

Harrisburg, Pa., November 7, 1917.

Hon. Charles E. Patton,
Secretary of Agriculture,
Harrisburg, Pa.

Dear Sir:—I have the honor to transmit herewith for your approval a report of the chemical analyses made by this Bureau of the samples of commercial fertilizers received from authorized sampling agents of the Department during the Spring season of 1917.

It is recommended that this report be published in bulletin form for distribution.

Very respectfully,

JAMES W. KELLOGG,
Chief Chemist.

FERTILIZER REPORT

January 1 to July 31, 1917.

INTRODUCTION

This report shows the results of analyses of the samples of fertilizers secured during the Spring inspection season from January 1 to July 31, 1917. They were secured by the authorized sampling agents of the Department in accordance with specific instructions and as directed by the Secretary of Agriculture under the provisions of the Fertilizer Law, from the selling agents located in the several counties of the State. Each sample was drawn from the sacks in a regular and uniform manner as indicated by the letter of instruction to agents shown on back of cover.

During this period 1,776 samples were forwarded to this bureau and of this number 1,311 were subjected to a chemical analysis, determinations being made for moisture, nitrogen, phosphoric acid and potash where guarantees for these constituents were given. In the case of those fertilizers containing nitrogen, with the exception of Ground Bones, Nitrate of Soda and those samples containing traces of insoluble nitrogen, determinations were made for insoluble nitrogen, water soluble nitrogen and for the portion of the insoluble nitrogen which was "active" and "inactive." The information secured by determining the activity of nitrogen is of value in indicating the character of the products used to furnish this element of plant food. In those cases where the "inactive" nitrogen is in excess of the "active" nitrogen, the material used may be of doubtful value where it is desired that the fertilizer will furnish nitrogen that may be readily utilized by the growing crops.

For the purpose of comparing the various brands and in order that the activity of nitrogen contained therein may be shown, the proportion of the insoluble nitrogen found to be "active" is divided into three classes: "a," "b" and "c." These letters are prefixed to the percentages of this form of nitrogen in the tables which follow and "a" indicates that $\frac{3}{5}$ or 60 per cent. of the water insoluble nitrogen is active; "b" from $\frac{2}{5}$ to $\frac{3}{5}$ or from 40 per cent. to 60 per cent., and "c" shows that $\frac{2}{5}$ or 40 per cent. or less of the insoluble nitrogen is in an "active" form. There were 1,051 samples in which determinations were made for these forms of nitrogen and 125 samples or 11.9 per cent. were found to be in class "a," 730 samples or 69.4 per cent. were in class "b" and 196 samples or 18.6 per cent. in class "c." In the case of the complete fertilizers more than one-half of the samples fell in class "b" and three-fourths of the nitrogen and phosphoric acid fertilizers were in the same class with respect to the "activity" of nitrogen.

In addition to the foregoing determinations, the samples carrying nitrogen were examined microscopically to determine whether or not such materials as leather, hair, hoof, horn or wool waste had been used as ingredients. The Fertilizer Laws requires that where these materials are made use of, a declaration to this effect shall be made on sacks or attached cards. No cases were reported by the agents where the labeling showed these products to have been used and the results of the examinations proved that only accidental traces of hair were present. An examination of those samples where the word "Bone" appeared as a part of the brand name and which are required by the Bone Law when so labeled to contain phosphoric acid in the form of animal bone, indicated that the law was not violated in this respect.

In order to avoid duplication of work and a great number of unnecessary determinations, where two or more samples representing like brands were received, except in a few cases where deficiencies occurred, a composite sample was analyzed. These samples were prepared by taking equal portions of each so that every mixed or composite sample represented a particular brand. Those brands represented by one sample were analyzed separately. In this manner, therefore, there were 384 single and 361 composite samples analyzed representing the brands of fertilizers registered with the Department and licensed to be sold in the State during 1917.

In order that the various brands of fertilizers might be compared, they were arranged or tabulated in six classes or groups as follows:—492 Complete Fertilizers furnishing nitrogen, phosphoric acid and potash; 551 Nitrogen and Phosphoric Acid Fertilizers, including dissolved or acidulated bone and fertilizers of similar character; 36 Ground Bone Fertilizers furnishing nitrogen and phosphoric acid; 203 Acidulated Phosphate Fertilizers, furnishing phosphoric acid; 4 Rock and Potash Fertilizers, furnishing phosphoric acid and potash, and 25 Miscellaneous Fertilizers, including ground tankage, prepared bone and meat, nitrate of soda, ground phosphate rock, "Phospho Plaster" and "Humus."

Because of the continuing high prices for potash goods and the irregularity of market conditions, no attempt has been made to show any valuations for the various brands of fertilizers included in this report. A study of the selling prices will show decided fluctuations of materials of like or similar grades. In the Complete Fertilizers where a considerable variety in the brands occurred, the prices ranged from $17.00 to $69.00 a ton and in this group where the majority of the brands included represented a formula of 1-8-1, the price varied from $21.00 to $30.00 a ton for goods which were guaranteed to supply the same amounts of plant food. In the following pages the results of analyses of the several groups or classes of fertilizers have been tabulated separately and will be discussed and considered with respect to their character or composition.

The number of deficiencies found upon analyses remained normal where the total number were considered, although 33.3 per cent. of the samples of bone were found to contain less total phosphoric acid than guaranteed. The guarantees for potash were in small amounts, two-thirds of the samples containing 1 per cent. and the deficiencies in this constituent were few in number.

ACKNOWLEDGMENTS.

Acknewledgment is herewith made and thanks extended to the Secretary of Agriculture, Hon. Charles E. Patton, Hon. George G. Hutchison, General Agent, and Mr. H. E. Klugh, Clerk, and each member of the Bureau Staff for assistance and co-operation in carrying on the season's fertilizer inspection work.

Mr. V. B. Hausknecht, First Assistant Chemist, had charge of the reception and preparation of the samples and supervision of the details of the analytical work, making check determinations where required. The microscopical examinations were made by H. E. Gensler, and the following assistants performed the analytical work: Messrs. J. E. Shull, William Weber, F. J. Holben, A. B. Long, G. J. Kuhlman, Jr., W. E. Huber and P. H. Fairlamb.

FERTILIZER LAWS.

The following laws regulating the sale of fertilizers are included in this report for reference as to the requirements necessary in selling fertilizers in Pennsylvania. The act of May 1, 1909, commonly referred to as the "New Fertilizer Law," was amended may 29, 1917, by changes in section 1 with respect to labeling and guarantees, and in section 3, making changes in schedule of registration fees. This law as amended and now in force together with the Bone Law, approved April 23, 1909, are as follows:

FERTILIZER LAW.

As amended May 29, 1917.

No. 205.

AN ACT

To regulate the manufacture and sale of commercial fertilizers; prescribing penalties for its violation, and repealing an act, entitled "An act to regulate the manufacture and sale of commercial fertilizers; providing for its enforcement, and prescribing penalties for its violation," approved the twenty-fifth day of March, Anno Domini one thousand nine hundred and one.

Section 1. Be it enacted, &c., That all corporations, associations, partnerships, or persons, before selling or offering for sale any commercial fertilizer in the Commonwealth, except the dung of domestic animals, lime, marl, and wood ashes, shall brand or attach to each bag, barrel, or package in a conspicuous place on the outside thereof, a plainly printed statement giving the following particulars and no others:—

(1) The number of pounds of fertilizer contained in the package.

(2) The name, brand, or trade-mark under which the fertilizer is sold.

(3) The name and principal address of the manufacturer, importer, or other person putting the fertilizer on the market in this Commonwealth.

(4) The minimum percentage of each of the following constituents which the fertilizer may contain: (a) Nitrogen; (b) nitrogen equivalent to ammonia; (c) total phosphoric acid; (d) available phosphoric acid; (e) potash soluble in distilled water. The potash may be claimed "derived from," or "equivalent to," sulphate of potash, if there is not a sufficient amount of chlorine present to unite with one-half ($\frac{1}{2}$) of one per centum (1%) of actual potash (K_2O). In the case of undissolved bone, tankage, phosphate rock, and similar materials in their natural and untreated conditions, when sold unmixed

with other substances, the minimum percentage of the total phosphoric acid therein may be stated, instead of the percentage of total and available phosphoric acid. But, in the case of basic phosphatic slag, the available phosphoric acid shall be stated on the basis of the results of an analysis by the Wagner method, so-called, until such time as the Association of Official Agricultural Chemists of North America shall adopt an official method of analysis for basic slag, after which the available phosphoric acid shall be stated on the basis of an analysis by the method of said association.

Section 2. Every manufacturer or importer of commercial fertilizers, as specified in section one of this act, shall, on or before the first day of January of each year, or before offering them for sale in this Commonwealth, file annually with the Secretary of Agriculture a statement of the names and number of brands of such commercial fertilizers, having distinct trade-names, that he shall offer for sale during the next ensuing year, and a copy of the analysis of each one of such brands of commercial fertilizers, as required by section one of this act.

Section 3. In addition to the statement required by section two of this act, every manufacturer or importer of commercial fertilizers shall, on or before the first day of January of each year, or before offering them for sale in this Commonwealth, file annually with the Secretary of Agriculture an affidavit showing the amount of each brand of fertilizer, having a distinct trade-name, sold within the Commonwealth during the last preceding year; and if the said amount shall be one hundred and fifty tons or less, he or they shall pay or cause to be paid to the Secretary of Agriculture the sum of fifteen dollars for each and every brand of such commercial fertilizer, having a distinct trade-name, sold within the State during the last preceding year; and if the said amount shall exceed one hundred and fifty tons, and be not more than two hundred and fifty tons, he or they shall pay the sum of twenty dollars, as aforesaid; if the said amount shall exceed two hundred and fifty tons, and not more than four hundred tons, he or they shall pay the sum of thirty dollars; if the amount shall exceed four hundred tons, and not more than five hundred tons, he or they shall pay forty dollars; and if the amount shall exceed five hundred tons, he or they shall pay fifty dollars. If such manufacturer or manufacturers, importer or importers, shall not have made any sales within the Commonwealth during the preceding year, he or they shall pay the sum of fifteen dollars upon each such brand, as aforesaid: Provided, That all moneys so received shall be immediately paid by the Secretary of Agriculture into the State Treasury for the use of the Commonwealth.

Section 4. No person shall sell, offer, or expose for sale, in this State, any pulverized leather, hair, ground hoofs, horns, or wool waste, raw, steamed, roasted, or in any form, as a fertilizer, or as an ingredient of a fertilizer or manure, without an explicit statement of the fact; said statement to be conspicuously affixed to every package of such fertilizer or manure, and to accompany and go with every lot, parcel, or package of the same.

Section 5. Any person or persons selling, offering or exposing for sale, any commercial fertilizer or any brand of the same, having a distinct trade-name, without the analysis required by section one of this act, or with an analysis stating that it contains a larger percentage of any one or more of the above-named constituents than is contained therein, or for the sale of which all the provisions of sections two and three have not been complied with, or any person violating any of the provisions of section four of this act, shall be guilty of a misdemeanor, and, on conviction, shall be sentenced to pay a fine of not less than twenty-five nor more than one hundred dollars for the first offense, and not less than two hundred dollars for each subsequent offense. It shall be the duty of the Secretary of Agriculture to enforce the provisions of this act, and all penalties, costs, and fines recovered shall be paid to him or his duly authorized agent, and by him shall be immediately paid into the State Treasury, for the use of the Commonwealth.

Section 6. The Secretary of Agriculture is hereby empowered to collect samples of commercial fertilizers, either in person or by his duly qualified agent or representative, and to have them analyzed, and to publish the results for the information of the public; and for this purpose the said Secretary of Agriculture, such assistants, agents, experts, chemists, detectives, and counsel as he shall duly authorize, shall have full access, ingress, and egress to and from all places of business, factories, barns, buildings, carriages, cars, and vessels, used in the manufacture and transportation, or sale, of any commercial fertilizer. They shall also have power to open any package or vessel containing or supposed to contain any commercial fertilizer, and take therefrom samples for analysis, upon tendering the value of said samples.

Section 7. The term "commercial fertilizers," as used in this act, shall be construed to mean any and every substance imported, manufactured, prepared, or sold for fertilizing or manuring purposes, except the dung of domestic animals, marl, lime, and wood-ashes, and not exempt by the provisions of section one of this act.

Section 8. This act shall go into effect on and after the thirty-first day of July, one thousand nine hundred and nine; and the act entitled "An act to regulate the manufacture and sale of commercial fertilizers; providing for its enforcement, and prescribing penalties for its violation," approved the twenty-fifth day of March, Anno Domini one thousand nine hundred and one, is hereby repealed.

Approved—The 1st day of May, A. D. 1909.

EDWIN S. STUART.

BONE LAW

No. 95.

AN ACT

Making it unlawful for any person, firm, or corporation, engaged in the manufacture or sale of commercial fertilizers, to use the word "bone" in connection with, or as part of the name of, any fertilizer, or any brand of the same, unless the phosphoric acid contained in such fertilizer shall be the product of pure animal bone; and providing a penalty for violation of the same.

Section 1. Be it enacted, &c., That it shall be unlawful for any person, firm, or corporation, engaged in the manufacture or sale of commercial fertilizers, to use the word "bone" in connection with, or as part of the name of, any fertilizer, or any brand of the same, unless the phosphoric acid contained in such fertilizer shall be the product of pure animal bone.

Section 2. Any person or persons violating the provisions of this act shall be deemed guilty of a misdemeanor, and, upon conviction thereof, shall pay a fine of fifty dollars for the first offense, and a fine of not less than one hundred dollars, nor more than two hundred dollars, for every subsequent offense; such fine or fines to be paid into the State Treasury, for the use of the Commonwealth. The Secretary of Agriculture shall, together with his deputies, agents, and assistants, be charged with the enforcement of this act.

Section 3. All magistrates, aldermen, and justices of the peace throughout this Commonwealth shall have jurisdiction to hear and determine actions arising from violations of the provisions of this act, and shall have authority to hold for court, or to impose the penalty hereby prescribed, subject to appeal, as the law shall direct.

Section 4. This act shall go into effect on the first day of January, Anno Domini nineteen hundred and ten.

Approved—The 23rd day of April, A. D. 1909.

EDWIN S. STUART.

DISCUSSION OF THE RESULTS OF INSPECTION.

The samples of fertilizer secured by the agents during the Spring inspection which were analyzed and are included in this report represented 736 different brands being manufactured by 88 Companies. There were a larger number of nitrogen and phosphoric acid fertilizers represented than of the other groups. While there were nearly as many samples of Complete Fertilizers, the amount of potash contained was low as more than two-thirds of the samples were guaranteed to contain 1 per cent. of potash. The shortage in potash salts has decreased the number of brands containing this constituent and has increased those brands of fertilizers containing only nitrogen and phosphoric acid. The Complete Fertilizers show a considerable variety in their formula and selling prices, as will be noted in the following remarks and tables. In those fertilizers containing nitrogen, except in Ground Bones, Nitrate of Soda and a few samples where the insoluble nitrogen was only .2 per cent. or less, determinations were made for the "active" and "inactive" forms of water insoluble nitrogen. This information is of value in judging of the materials used as a source of nitrogen supply. Sharp lines of demarkation, however, cannot be drawn with justice in judging whether or not the source of nitrogen is of a good or an inferior character. Where the "active" nitrogen is equal to or in excess of the "inactive," the materials used may be considered to be in such forms that it may readily be utilized by the growing plant or become available. In the fertilizers in which this form of nitrogen was determined, three classes, "a," "b" and "c" for the active nitrogen are shown as in former reports. Class "a" indicates that $\frac{3}{5}$ or 60 per cent. or more of the insoluble nitrogen is "active," class "b" from $\frac{2}{5}$ to $\frac{3}{5}$ or 40 per cent. to 60 per cent., and class "c" $\frac{2}{5}$ or 40 per cent. or less contains insoluble nitrogen in the "active" form. Of the total number of samples in which these determinations were made, two-thirds were in class "b."

Where average results of a few samples and results of analysis of only one brand of fertilizers are shown, it must, of course, be recignized that these figures are not as fairly representative of the various brands being sold in the State as would be the case were a larger number obtained.

COMPLETE FERTILIZERS.

The fertilizers received and analyzed furnishing the three forms of plant food: nitrogen, phosphoric acid and potash, numbered 492 samples, 286 brands, the output of 65 Companies. Of this number of Complete Fertilizers there were 72 different formulas or grades showing varying guarantees. The guarantees for nitrogen ranged from $\frac{1}{4}$ of 1 per cent. to 12 per cent., the available phosphoric acid, with the exception of one brand carrying a fraction of a per cent., varied from 3 per cent. to 17 per cent. The potash guarantees were from $\frac{1}{2}$ of 1 per cent. to 3 per cent. Of the total number guaranteed for potash, 50 brands and 90 samples exceeded 1 per cent. Over two-thirds of the brands and samples were guaranteed to contain 1 per cent. of potash, 17 brands contained 3 per cent. of potash, the formula 1-8-1 being represented by 34 brands and 66 samples, this formula, therefore, exceeded the other in number of samples. In this grade, while the average was close and exceeded the guarantees, there was a variation in nitrogen from .81 per cent. to 1.77 per cent. with an average of 1.01 per cent. The phosphoric acid varied from 8.03 per cent. to 10.05 per cent. and averaged 8.77 per cent. and the potash ranged from .76 per cent. to 1.48 per cent. and averaged 1.14 per cent. The most noticeable variations were in the selling prices which, for these 34 brands of 1-8-1 fertilizers guaranteed to contain the same amount of plant food, ranged from $21.00 to $30.00 a ton and averaged $24.23. The next formula in order with number of samples received was 2-10-1 with 17 brands and 31 samples. In this grade also similar variations were noted in the analyses while the prices ranged from $19.00 to $32.00 with an average of $27.96 a ton. The formula 1½-10-1 was represented by 16 brands and 27 samples with prices from $22.25 to $36.00, averaging $27.76 a ton. The formula 2-9-1 was represented by 15 brands and 18 samples, with prices varying from $25.00 to $30.00 and averaging $28.40 a ton. Those having a formula of 1-10-1 included 15 brands and 26 samples with selling prices from $17.75 to $32.00, averaging $25.74 per ton. The remaining formulas were represented by a less number of samples and one brand was guaranteed to contain .58 per cent. total plant food which, upon analysis, was found to contain .71 per cent., no selling price being obtained. In estimating the average compositions and prices, this brand was not included.

Forty-one of the samples of Complete Fertilizers or 8.3 per cent. were deficient in nitrogen, 22 or 4.4 per cent. were deficient in available phosphoric acid and the samples where potash was less than the guarantees, numbered 22 or 4.4 per cent.

Where two or more samples were received having the same formula, the results of analysis were averaged and together with the results of those representing single formulas were tabulated in order that their composition and retail prices might be compared. To determine the formula of any brand, it is necessary to multiply the guarantee for nitrogen by 1.2158 taking this result together with the guarantees for available phosphoric acid and total potash. In this manner the different formulas have been considered in tabulating these results as follows:

Formula.	Number of brands.	Number of samples.	Nitrogen.	Phosphoric acid.	Potash.	Price.
	1	1	.25*	.13*	.12*	--------
¼-8-½,	1	3	.49	8.47	.98	$18.00
½-6-½,	1	1	.78	6.51	.56	--------
½-7-½,	2	2	.69	7.70	.94	18.38
½-7-1,	1	1	.76	7.36	1.02	20.00
½-7-2,	1	1	1.35	8.71	2.40	23.50
½-7-3,	1	1	1.19	7.90	3.08	29.00
½-8-¼,	2	5	.62	8.72	.59	19.38
½-8-½,	6	12	.70	8.62	.73	19.70
½-8-1,	11	24	.62	8.55	1.15	21,73
½-8-2,	1	2	1.01	8.31	2.06	25.50
½-9-½,	1	1	.43	11.16	.60	16.50
1-7-¼.	2	2	1.08	8.14	.42	20.50
1-7-1,	15	27	.94	7.75	1.20	23.23
1-7-1½,	1	1	.76	8.61	1.30	21.50
1-7-3.	2	3	1.08	8.00	2.48	31.50
1-8-½,	2	2	.94	8.74	.95	20.00
1-8-1,	34	66	1.01	8.87	1.14	24.23
1-8-1½,	2	5	1.08	8.21	1.73	28.00
1-8-2,	10	18	1.00	8.46	2.11	27.18
1-9-1,	7	15	1.15	9.23	1.03	24.55
1-9-3,	2	4	.98	9.46	2.94	36.44
1-10-1,	15	26	1.04	10.70	1.21	25.74
1-11-1,	1	1	.65	12.51	1.18	28.75
1-12-1,	1	1	.80	12.30	1.34	24.25
1¼-8-¾,	1	1	1.41	7.98	1.14	24.00
1¼-10-1,	1	3	1.24	11.07	1.16	26.67
1½-7-1,	1	1	1.37	7.69	1.18	24.70
1½-8-½,	1	1	1.52	8.01	.72	22.00
1½-8-1,	1	3	1.52	8.51	1.10	27.17
1½-8½-1,	1	2	1.05	9.00	1.38	24.30
1½-9-1,	1	1	1.19	9.80	1.02	24.50
1½-9-3,	1	3	1.31	9.21	3.10	30.00
1½-10-1,	16	27	1.45	10.89	1.18	27.76
1¾-9-1,	1	2	1.75	9.48	1.70	31.00
2 6-3,	1	3	1.74	7.12	2.96	29.83
2-6½-1,	1	1	1.74	7.43	1.18	--------
2-7-2,	1	2	2.05	9.07	2.30	31.50
2-8-1,	7	15	1.66	8.21	1.14	27.70
2-8-2,	11	21	1.80	8.18	2.04	31.41
2-8-3.	7	11	1.70	8.72	3.15	37.04
2-8½-1.	5	7	2.08	8.92	1.20	23.68
2-9-1,	15	18	1.78	9.84	1.08	28.40
2-10-½.	1	1	1.87	10.09	.88	26.50
2-10-1,	17	31	1.76	10.69	1.32	27.96
2½-7½-1,	1	1	2.45	10.75	.46	33.00
2½-8-1,	10	14	2.14	8.43	1.11	29.91
2½-8-2,	1	1	1.65	9.49	2.12	33.00
2½-10-1,	6	11	2.05	10.17	1.33	27.16
3-7-1.	1	1	2.51	7.72	1.18	30.00
3-8-1,	6	9	2.62	9.17	1.35	30.82
3-8-3,	1	1	2.49	8.53	2.90	42.50
3-9-1,	12	21	2.44	9.67	1.26	32.29
3½-5-1,	2	2	2.39	7.49	0.42	33.50
4-3½-1,	2	2	3.54	4.79	1.33	30.00
4-6-2,	1	3	3.32	6.18	2.50	37.33
4-8-1,	4	6	3.39	9.03	1.54	33.80
4-8-2,	2	3	3.28	8.28	2.07	34.83
4-9-1,	6	9	3.08	9.44	1.27	36.06
4-10-1.	1	2	3.07	11.76	1.32	34.50
4-10-3,	2	4	3.11	10.38	2.92	45.00
4½-8-1,	1	3	3.45	7.77	1.42	43.50
4½-17-½,	1	2	3.19	11.31	0.24	31.00
5-3-1,	1	1	5.15	3.70	1.28	40.00
5-4-½,	1	1	4.76	4.23	.68	35.00
5-6-1,	1	1	4.12	6.01	1.40	45.00
5-8-1,	3	6	4.18	8.92	1.26	44.33
6-5¼-1½,	1	1	6.31	6.42	.20	65.00
7-6-1,	2	3	6.12	6.24	1.96	43.33
9-5-2,	1	2	5.77	6.04	1.80	45.43
10-5-1,	1	1	6.90	6.66	1.14	52.00
12-5-1,	1	2	9.69	7.27	2.61	67.00
72 Totals,	285	492	1.67	9.07	1.38	$28.33

(*Excluded from average.)

The variations in the composition of the Complete Fertilizers, as would be expected from such a variety of formulas, were considerable. The nitrogen content ranged from 0.43 per cent. to 9.69 per cent. and averaged 1.67 per cent. In all but 5 of the samples, where the water insoluble nitrogen was .2 per cent. or less, determinations were made for that portion of the insoluble nitrogen which were "active" and "inactive." As a result of these determinations more than one-half of the samples were found to contain nitrogen in such forms that the "active" nitrogen was present in from 40 to 60 per cent. of the insoluble portion. In 71, or 14.5 per cent. of the samples, the "active" nitrogen was 60 per cent. or more of the insoluble and classed as "a"; 324, or 65 per cent., were in class "b" and 92, or 19 per cent. of the samples, were in class "c" containing 40 per cent. or less of insoluble nitrogen in an "active" form. The percentages of available phosphoric acid ranged from 3.70 per cent. to 12.51 per cent. and averaged 9.07 per cent. and the potash was present in amounts of from 0.20 per cent. to 3.47 per cent. averaging 1.38 per cent. The selling prices in this group were from $16.50 to $69.00 a ton, averaging $28.33. The detailed analyses of these samples will be found in Table I.

NITROGEN AND PHOSPHORIC ACID FERTILIZERS.

This group of fertilizers, furnishing nitrogen and phosphoric acid including dissolved or acidified bone and brands of like composition, numbered 551 samples, representing 299 brands being the products of 77 companies. The variations noted in their analyses were as follows: Lowest nitrogen 0.45 per cent., highest 8.62 per cent., average 1.86 per cent.; lowest available phosphoric acid 5.51 per cent., highest 15.27 per cent., average 10.01 per cent.; the selling prices fluctuated from $14.00 to $180.00 and averaged $23.93 a ton. The highest price was for a brand carrying nine times as much nitrogen and twice as much phosphoric acid as that which sold for $14.00 a ton.

Of the total number of samples of this group 36, or 6.5 per cent., were deficient in nitrogen and 67, or 12.1 per cent., were deficient in phosphoric acid. The determinations for the activity of the insoluble nitrogen showed that 49, or 8.9 per cent., were in class "a"; 397, or 72.4 per cent., in class "b" and 102, or 18.6 per cent., in class "c." The results of analyses will be found in Table II.

GROUND BONE FERTILIZERS.

The samples of Ground Bone, furnishing nitrogen and phosphoric acid, numbered 36, representing 25 brands being sold in the State. They were the out-put of 18 companies. Considerable variation was noted in their chemical analyses, the nitrogen ranging from 1.31 per cent. to 6.59 per cent. with an average of 3.25 per cent. and the total phosphoric acid varied from 12.28 per cent. to 28.15 per cent. with an average of 22.53 per cent. Those samples in which deficiencies occurred in the case of nitrogen numbered 3, or 8.3 per cent., and 12, or 33.3 per cent., of the samples were deficient in total phosphoric acid.

The determinations for fineness, or the portion of the samples which upon sieving passed through a 1-50 of an inch sieve and classed as "fine," showed a noticeable difference in this respect. The lowest fineness test was 31 per cent. and that having the highest or greatest state of fineness was 72 per cent. The average determinations were 57 per cent. "fine" and 43 per cent. "coarse." The selling prices secured were from $32.00 to $50.00, averaging $38.80 a ton. The analyses of each sample will be found in Table III.

ACIDULATED PHOSPHATE FERTILIZERS.

The fertilizers of this class, furnishing phosphoric acid, numbered 203 samples, 104 brands which were registered by 53 companies. The analytical results showed but little variation as a rule as only 6 samples, or 3 per cent., were low in available phosphoric acid as compared with their guarantees. The lowest result was 7.79 per cent. and the highest 18.32 per cent., the former brand selling at $20.00 and the latter selling at $18.70 a ton. The average phosphoric acid content was 15.57 per cent. The prices, obtained by the agents varied from $13.00 to $25.00 and averaged $17.56 a ton. The brand which sold at the higher figure analyzed 15.56 per cent. available phosphoric acid and there were 7 brands carrying from 10.52 per cent. to 16.76 per cent. which were sold for $15.00 a ton. One-half of the brands were guaranteed to contain 16 per cent. available phosphoric acid and $\frac{1}{3}$ to contain 14 per cent. Only 8, or 4 per cent. of the samples were found to be deficient. The results of analyses of the several samples will be found in Table IV.

ROCK AND POTASH FERTILIZERS.

There were only 4 brands and samples of fertilizers of this class furnishing phosphoric acid and potash received during the year. As will be noted by referring to Table V, 1 sample was deficient in available phosphoric acid and 2 in potash. The average results were 9.30

per cent. available phosphoric acid, 1.37 per cent. potash, the selling price being $25.70 a ton. The brand having the lowest selling price of $21.00 contained 8.54 per cent. of combined phosphoric acid and potash while that which sold for $35.00 a ton contained 10.63 per cent. of these combined plant foods. The detailed results will be found in Table V.

MISCELLANEOUS FERTILIZERS.

The samples received and classified as "Miscellaneous" numbered 25. Of this number 11 were animal tankage which, upon analysis, were found to contain nitrogen in amounts of from 4.82 per cent. to 7.55 per cent. with an average of 5.69 per cent. and total phosphoric acid of from 8.50 per cent. to 16.16 per cent. averaging 12.10 per cent. The selling prices for these brands of tankages varied from $33 to $45 averaging $38.61 a ton. The active insoluble nitrogen in 5 of these samples were in class "a" and the active nitrogen in the remaining number was in class "b." This group also included 6 samples of nitrate of soda having an average total content of nitrogen of 16.35 per cent. and the selling prices were from $72 to $80 a ton averaging $78. A product called "Humus" was represented by 3 samples which had the following average composition: nitirogen 2.12 per cent., total phosphoric acid 0.87 per cent. and potash 0.36 per cent. The selling price was obtained for only one of these brands being $80 a ton. There were two samples of "Phospho Plaster" and one sample each of "Pure Bone and Meat," "Garbage Tankage" and Phosphate Rock. The analyses of these products will be found in Table VI.

DEFICIENCIES.

In estimating the number of samples found to be deficient in nitrogen, phosphoric acid and potash as compared with the guarantees given for these constituents or elements of plant food, only those cases were considered where the percentages fell .2 per cent. or more below the guarantees and where the guarantees were .50 per cent. or less, in the case of nitrogen and potash, only those samples which varied .10 per cent. or more from the guarantees were considered as deficient. In those fertilizers where the phosphoric acid was not shown in the available form, such as ground bones, the deficiencies in the total phosphoric acid were noted. These deficiencies are indicated in the tables which follow by an asterisk (*) prefixed to the percentages found present upon analysis. Of the total number of samples analyzed, 222 or 16.9 per cent. were found to fall below their guarantees while the rule has been, as shown in previous reports, for the "averages" to greatly exceed the number of cases where the full amount of plant food was not supplied as claimed. The number of deficiencies occurring in this Spring inspection's samples exceeded those observed in the samples selected during the fall inspection of 1916 and remained less in number than those found in the corresponding season's work of last year.

There were 1,103 samples guaranteed to contain nitrogen and of this number, 82 or 7.4 per cent. were found to be deficient. Those guaranteed to contain available phosphoric acid numbered 1,247 and of these 98 or 7.8 per cent. were deficient. There were 52 samples in which guarantees for total phosphoric acid were given instead of available phosphoric acid including ground bones and 16 miscellaneous samples and 18 of this number or 34.6 per cent. were found to be deficient. The number of deficiencies in the 498 samples containing potash was 25 or 5 per cent. The following table shows the number of deficiencies in each class or group of the samples analyzed.

Classes of Fertilizers.	Number of samples.	Deficient in nitrogen.	Deficient in available phosphoric acid.	Deficient in potash.
Complete fertilizers,	492	41	22	22
Nitrogen and phosphoric acid fertilizers,	551	36	67	--------
Ground bone fertilizers,	36	3	*12	--------
Acidulated phosphate fertilizers,	203	--------	8	--------
Rock and potash fertilizers,	4	--------	1	2
Miscellaneous fertilizers,	25	2	*5	1
Totals,	1,311	82	115	25

*Total phosphoric acid.

AVERAGE ANALYSIS AND RETAIL PRICES.

The following table will show the average analysis or composition of the several classes of fertilizers, excluding the miscellaneous samples, secured during the Spring season together with the average selling prices prevailing at the time the samples were received.

	Complete fertilizers.	Nitrogen and phosphoric acid fertilizers. (Dissolved bones, etc.).	Ground bone fertilizers.	Acidulated phosphate fertilizers.	Rock and potash fertilizers.
Number of samples,	492	551	36	203	4
	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.
Moisture.	6.70	6.14	5.79	6.64	9.01
Total nitrogen,	1.67	1.86	3.25	-------	-------
Total phosphoric acid,	10.48	11.53	22.53	16.38	10.87
Available phosphoric acid,	9.07	10.01	-------	15.57	9.30
Insoluble phosphoric acid,	1.41	1.51	-------	0.83	1.56
Potash,	1.38	-------	-------	-------	1.37
Mechanical analysis of bone:					
Fine,	-------	-------	57	-------	-------
Coarse,	-------	-------	43	-------	-------
Selling price,	$28.33	$23.93	$38.80	$17.56	$25.70

A comparison of the foregoing averages with the results reported for the last season will show no marked differences. The averages for nitrogen are somewhat higher than those found in the case of the samples received during the Fall season of 1916, while the average available phosphoric acid remains practically the same. In the case of the Acid Phosphates and Rock and Potash Fertilizers, the insoluble phosphoric acid showed an increase and there was also a slight increase in average potash, in the Complete Fertilizers over that for the last season as well as exceeding the average potash contained in this class of fertilizers for the Spring of 1916. The average fineness of the samples of Ground Bone showed a marked decrease in the percentages of "fine" or that portion passing a 1-50 of an inch sieve. There was a noticeable increase in the selling prices, except in the case of the Acid Phosphates over the prices observed for the Fall season. The average price for the Acid Phosphates was less, and the Rock and Potash goods showed an increase of $4.09. The following average prices for the groups of fertilizers included in this report together with those prevailing for the Fall season of 1916 and the corresponding season of last year will show the price fluctuation noted during these periods. These average prices for the present season, the Fall season of 1916 and Spring season of 1916 respectively on the several groups of fertilizers are as follows: Cemplete Fertilizers $28.24, $24.97, $28.33; the Nitrogen and Phosphoric Acid Fertilizers $23.61, $21.79, $23.93; Ground Bone Fertilizers $36.30, 37.45, $38.80; Acidulated Rock Phosphate Fertilizers $18.27; $18.46, $17.56; Rock and Potash Fertilizers $16.30, $21.62, $25.70.

The selling prices obtained for the miscellaneous samples averaged $38.61 for Tankage, and $78 for Nitrate of Soda. The prices for the remaining products represented by only a few samples together with the results of analyses will be found in Table VI.

KEY TO TABLES.

All samples analyzed were given a chemist's number as shown in the extreme left and right hand columns.

Composite samples are indicated by brackets embracing two or three chemists' numbers of the same brand of fertilizer. In these cases the brand name is shown only once.

Samples analyzed are grouped in alphabetical order of manufacturers' names and in these groupings brand names are shown in the same order.

The asterisk (*) indicates the cases where total nitrogen, available phosphoric acid and total potash are deficient to the extent of .2 per cent. or more below their respective guarantees. In cases where the guarantees are .5 per cent. or less the deficiencies noted are where the amount is .1 per cent, or more below the guarantees.

Order of results of analysis: Moisture, Total Nitrogen found and guaranteed, Water Soluble Nitrogen, Active Insoluble Nitrogen, Inactive Insoluble Nitrogen, Total Phosphoric Acid found and guaranteed; Available Phosphoric acid, found and guaranteed; Insoluble Phosphoric acid; Total Potash, found and guaranteed. The Potash is shown as Muriate in the columns and those cases where Potash is present in part or in whole as Sulphate, a dagger at the bottom of the page shows the percentages of Potash in these forms.

"a," "b," "c," the letters prefixed to the percentages of Active Insoluble Nitrogen indicates that portion of the Water Insoluble Nitrogen which is active and assimilated by plants. The cases where the Active Insoluble Nitrogen is $\frac{3}{5}$ or 60% or more of the Water Insoluble Nitrogen are indicated by "a." The cases where from $\frac{2}{5}$ to $\frac{3}{5}$ or from 40% to 60% of the Insoluble Nitrogen is Active, are indicated by "b," and by "c" where this form is $\frac{2}{5}$ or 40% or less.

To determine percentage of Ammonia, multiply percentage of Nitrogen by factor 1.2158. To determine the formula of any brand, as guaranteed, multiply Total Nitrogen by 1.2158 to obtain Ammonia and then use this figure and the guarantees for Available Phosphoric Acid and Total Potash. For example, Nitrogen guarantee equals .82% (.82×1.2158=1%). Ammonia equals 1%, Available Phosphoric Acid 8%, Potash 1%. Formula therefore is 1-8-1.

Complete Fertilizers, Table I, furnishing Nitrogen, Phosphoric Acid and Potash.

Nitrogen and Phosphoric Acid Fertilizers, Table II, including Dissolved Bones and other like products.

Ground Bone Fertilizers, Table III, furnishing Nitrogen and Phosprohic Acid.

Acidulated Phosphate Fertilizers, Table IV, furnishing Phosphoric Acid.

Rock and Potash Fertilizers, Table V, furnishing Phosphoric Acid and Potash.

Miscellaneous Fertilizers, Table VI, including Nitrate of Soda, Tankage, Meat and Bone and Pulverized Phosphate Rock, Humus and "Phospho Plaster."

TABLE NO. I.—

Furnishing Nitrogen,

Chemist's number.	Name of Manufacturer and Brand.	Agent and Place of Sampling.	Moisture.
	THE AMERICAN AGRICULTURAL CHEMICAL CO., NEW YORK, N. Y.		%
977	All Crop Fish Guano,	Roy J. Dunham, Wellsboro,	8.96
1370		I. D. Williams, Ariel,	
2276		Wyalusing Hay Co., Wyalusing,	
1934	Allen's Potato and Truck Manure 1916,	Harvey Detweiler, Chester Springs,	9.74
1798	Bradley's Complete Manure for Potatoes and Vegetables 1916,	G. H. Smith, Franklin Forks,	9.68
987	Bradley's New Method Fertilizer 1916,	Charles McDowell, Mansfield,	6.68
1349		Saint Hardware Co., Sharpsburg,	
2220		Joseph Cole, Millville,	
2321	Bradley's Potato Fertilizer 1916,	Fred Quade, McFall's Ferry,	5.72
2099	Bradley's Special Tobacco Manure 1916,	D. H. Witmer, Safe Harbor,	5.17
988	Bradley's Unicorn 1916,	Charles McDowell, Mansfield,	9.57
1335	Canton Chemical Baker's Special Wheat, Corn and Grass Mixture 1916,	H. F. Gump & Son, Everett,	7.11
1842		T. J. Jacobs, Somerfield,	
2533		H. L. Orr, Tyrone,	
1843	Canton Chemical Baker's Standard High Grade Guano 1916.	King Brothers, Uniontown,	5.06
2314		D. W. Drawbaugh, Harrisburg,	
2631	Canton Chemical Eagle Phosphate,	Jeff Altfather, Berlin,	6.34
2168	Canton Chemical Potato and Truck Manure 1916.	I. E. Mangel, Barnesville,	8.46
1333	Canton Chemical Potato and Vegetable Manure 1916,	H. F. Gump & Son, Everett,	7.31
2167		I. E. Mangel, Barnesville,	
2542		H. L. Stultz & Son, Hollidaysburg,	
1238	Complete Potato Mixture,	W. J. Johnson, Sinking Spring,	8.62
1356		J. S. Moore & Son, Oakdale,	
2218		Joseph Cole, Millville,	
1017	Corn and Vegetable Compound,	Wysox Produce Co., Wysox,	9.40
1471		C. E. Drake, Athens,	
1800		Burlington Allard, Hallstead,	
2519	Crocker's Ammoniated Superphosphate 1916,	John E. Walters, Jamestown,	5.35
1019	Crocker's Complete Manure 1916,	Farmers Co-Operative Co., Wysox,	6.72
1602		T. R. Bolton, Cochranton,	
2471		B. F. Cory, Corryville,	
1606	Crocker's General Crop Fertilizer,	T. R. Bolton, Cochranton,	5.71
2591		Deity & Mooney, Clarion,	
2604		A. M. Frederick, Jr., Fairchance,	
907	Crocker's Potato, Hop and Tobacco Fertilizer 1916,	John Greenleaf, Quarryville,	6.50
2489		D. H. Gregory, Russell,	
2522		Hartwell & Philips, New Wilmington,	
1630	Crocker's Universal Grain Grower 1916,	C. H. Smith Co., Sheffield,	4.47
1718		W. H. Kaufman, Harmony,	
2486		S. C. Mensch, Marienville,	
2059	Dead Shot Phosphate 1916,	S. M. Shuler, Liverpool,	7.13
2183		Roy Nixon, Mill Hall,	
2311		S. A. Fishburn, Paxtonia,	
1361	Detrick's Corn and Oats Fertilizer 1916,	Gelbach & Behm, Evans City,	7.29
936	W. S. Farmer & Co.'s Clyde Brand 1916,	J. W. Shoemaker, Littlestown,	6.50
2641		C. G. Sechler, Somerset,	
938	W. S. Farmer & Co.'s General Crop Growers,	J. W. Shoemaker, Littlestown,	8.00
937	W. S. Farmer & Co.'s Pelican Guano 1916,	J. W. Shoemaker, Littlestown,	8.94
2638		E. J. Sipe, Rockwood,	
1755	Grain and Grass Compound,	Paxton Flour & Feed Co., Bowmansdale.	9.18
2313		D. W. Drawbaugh, Harrisburg,	
1566	Great Eastern General 1916,	Oliver Halteman, Easton,	6.18
2651		A. E. Trent, Coleman,	
1239	Great Eastern Vegetable, Vine and Tobacco Fertilizer 1916,	W. J. Johnston, Sinking Spring,	7.59
1969		Oliver Halteman, Easton,	

a=3/5 or more, b=2/5 to 3/5, c=2/5 or less of active insoluble nitrogen.

COMPLETE FERTILIZERS.

Phosphoric Acid and Potash.

NITROGEN.					PHOSPHORIC ACID.					POTASH.		Selling price per ton at place of selection.	Chemist's number.
Total.			Insoluble.		Total.		Available.						
Found.	Guaranteed.	Water soluble.	Active.	Inactive.	Found.	Guaranteed.	Found.	Guaranteed.	Insoluble.	Found.	Guaranteed.		
%	%	%	%	%	%	%	%	%	%	%	%	$	
1.80	1.23	1.15	b0.38	0.27	12.91	11.00	11.51	10.00	1.40	1.30	1.00	28 00 27 00 26 50	977 1370 2276
2.80	2.47	2.05	b0.43	0.32	10.29	10.00	9.01	9.00	1.28	1.08	1.00	32 00	1934
3.42	3.29	2.50	a0.63	0.29	11.65	10.00	9.16	9.00	2.49	1.26	1.00	29 00	1798
0.96	0.82	0.65	a0.23	0.08	10.24	9.00	9.16	8.00	1.08	1.28	1.00	26 00 30 00 21 50	987 1349 2220
2.25	2.06	1.48	a0.46	0.31	9.91	9.00	7.81	8.00	2.10	1.08	1.00	26 95	2321
5.15	4.53	1.51	a2.29	1.35	3.76	4.00	3.70	3.00	0.06	†1.28	1.00	40 00	2099
1.80	1.65	1.19	a0.38	0.23	12.17	10.00	9.85	9.00	2.32	1.00	1.00	30 00	988
0.99	0.82	0.45	b0.22	0.32	10.79	10.00	9.83	9.00	0.96	1.04	1.00	25 00 27 00 25 00	1335 1842 2533
2.20	2.06	1.26	b0.51	0.43	10.54	9.00	9.07	8.00	1.47	1.38	1.00	35 00 -------	1843 2314
0.91	0.82	0.37	b0.24	0.30	8.95	8.00	7.57	7.00	1.38	1.01	1.00	22 50	2631
4.17	3.29	3.20	a0.58	0.39	10.27	10.00	9.01	9.00	1.26	1.98	1.00	36 00	2168
1.47	1.23	0.84	b0.30	0.33	12.28	11.00	10.88	10.00	1.40	1.30	1.00	36 00 27 50 30 00	1333 2167 2542
3.13	3.29	2.18	a0.57	0.38	11.99	11.00	10.46	10.00	1.53	2.86	3.00	45 00 47 00 41 00	1238 1356 2218
*2.20	2.47	1.41	b0.46	0.33	11.45	10.00	10.05	9.00	1.40	1.16	1.00	32.00 32 00 31 50	1017 1471 1800
3.02	2.47	2.04	a0.67	0.31	10.29	10.00	8.95	9.00	1.34	1.08	1.00	32 00	2519
0.87	0.82	0.48	b0.22	0.17	11.60	11.00	10.83	10.00	0.77	1.06	1.00	22 20 27 50 30 00	1019 1602 2471
0.81	0.82	0.36	b0.22	0.23	8.71	8.00	7.50	7.00	1.21	1.18	1.00	22 50 25 00 22 00	1606 2591 2604
2.29	2.06	1.61	a0.42	0.26	10.91	11.00	10.08	10.00	0.83	1.26	1.00	24 00 32 00 31 35	907 2489 2522
0.85	0.82	0.27	b0.24	0.34	10.06	9.00	8.98	8.00	1.08	1.14	1.00	32 00 24 00 27 00	1630 1718 2486
0.58	0.41	0.27	b0.12	0.19	9.46	9.00	8.76	8.00	0.70	1.52	1.00	20 50 26 00 21 00	2059 2183 2311
1.06	0.82	0.65	b0.23	0.18	11.63	10.00	11.18	9.00	0.45	†1.02	1.00	25 40	1364
1.05	0.82	0.63	b0.18	0.24	9.63	9.00	8.93	8.00	0.70	1.00	1.00	21 00 23 00	936 2641
0.90	0.82	0.31	b0.24	0.35	8.41	8.00	7.64	7.00	0.77	1.12	1.00	20 50	938
0.56	0.41	0.26	b0.12	0.18	9.46	9.00	8.76	8.00	0.70	1.06	1.00	19 50 19 60	937 2638
1.68	1.65	1.01	b0.30	0.37	9.69	9.00	8.54	8.00	1.15	1.99	2.00	30 00 -------	1755 2313
1.12	0.82	0.49	b0.30	0.33	10.76	9.00	10.05	8.00	0.71	1.24	1.00	------- 21 65	1566 2651
1.94	2.06	1.23	a0.44	0.27	11.25	11.00	10.36	10.00	0.89	1.60	1.00	28 00 -------	1239 1969

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*Deficient.

†No. 2099 As muriate 0.48%; as sulphate, 0.80%.

†No. 1364 As muriate, 0.57%; as sulphate, 0.45%.

TABLE I.—COMPLETE

Chemist's number.	Name of Manufacturer and Brand.	Agent and Place of Sampling.	Moisture.
			%
2358	Maryland Ammoniated Phosphate 1916,	E. S. Minnich, Brillharts,	8.61
1697	Michigan Carbon Works Red Line Complete Manure,	Davis & Hyde, Spartansburg,	6.79
2490	Milsom's Corn Fertilizer 1916,	D. H. Gregory, Russell,	5.02
2136	Milsom's Potato and Cabbage Manure 1916,	Aaron Zimmerman, Lehighton,	8.51
2249		McConnell & Watterson, Kittanning	
2597		J. H. Edinger, Luthersburg,	
2495	Milsom's Potato, Hop and Tobacco Fertilizer 1916,	W. J. Russell, Bear Lake,	5.55
1348	Milsom's Wheat, Oats and Barley 1916,	Keil Hardware Co., Sharpsburg,	5.85
2481		A. Dunn & Son, Tidioute,	
2598		J. H. Edinger, Luthersburg,	
1524	Moro-Phillips' Farmers Phosphate,	S. C. Yearick, Rebersburg,	6.82
1248	Moro-Phillips' Farmers Potato Mixture 1916,	R. W. Daub, Muir,	3.95
1928		J. J. Tustin, Phoenixville,	
1596	North Western Complete Compound 1916,	Farmers Supply Co., New Castle,	6.54
1597	North Western Farmers Standard 1916,	Farmers Supply Co., New Castle,	6.00
1032	North Western Red Line Fertilizer 1916,	N. R. Yost, Myerstown,	6.03
1269	North Western Shawnee Phosphate 1916,	Kamerer Hardware Co., Lehighton,	9.33
1268	North Western Success Phosphate,	Kamerer Hardware Co., Lehighton,	9.00
1758	Quinnipiac Climax Phosphate 1916,	Paxton Flour & Feed Co., Bowmansdale,	7.97
1757	Quinnipiac Mohawk Fertilizer,	Paxton Flour & Feed Co., Bowmansdale,	10.38
1658	Reese's Harvest Queen 1916,	W. H. Hess, York,	6.52
1051	Reese's Potato Manure 1916,	O. H. Yoder, Hegins,	6.54
1135	Reese's Potash and Truck Manure 1916,	H. F. Miller, Etters,	7.00
1761	Sharpless & Carpenter's Potato, Corn and Truck Guano 1916,	Paxton Flour & Feed Co., Bowmansdale,	8.35
2174		L. C. Thompson, Pottsville,	
1759	Special Complete Fertilizer,	Paxton Flour & Feed Co., Bowmansdale,	6.37
1948	Susquehanna Ammoniated Phosphate 1916,	Milhous Brothers, Mendenhall,	6.64
2039		Lloy Krebs, Glen Rocks,	
2053		Daniel C. Shaffer, Elizabethville,	
1498	Susquehanna Crop Grower,	B. F. Lightner, Landisburg,	5.62
2021		Z. J. Peters, Guernsey,	
1422	Susquehanna Potato Phosphate 1916,	H. P. Passmore & Bro., Oxford,	7.95
1835	Susquehanna XXV Phosphate,	The Ben-Ohl Farms, Mill Hall,	6.96
2052		Daniel C. Shaeffer, Elizabethville,	
1760	Tygert-Allen's Standard Brand Phosphate 1916,	Paxton Flour & Feed Co., Bowmansdale,	9.35
1935	Tygert-Allen's Star Potato Grower 1916,	Harvey Detweiler, Chester Springs,	7.69
1860	Wheeler's Corn Fertilizer 1916,	W. S. Grimes, West Brownsville,	5.93
1861	Wheeler's Potato Manure 1916,	W. S. Grimes, West Brownsville,	5.50
2274	Williams & Clark's Americus Corn Phosphate 1916.	James Patton, Noxen,	11.32
1267	Williams & Clark's Americus High Grade Special for Potatoes and Root Crops 1916,	H. H. Sloat, Weatherly,	9.14
1797	Williams & Clark's Americus Potato Manure 1916,	O. P. Beebe, Montrose,	8.43
2406		Alfred Bergstresser, Hellertown,	
1265	Williams & Clark's Elk Brand 1916,	H. H. Sloat, Weatherly,	9.12
1263	Williams & Clark's Farmers Reliable Phosphate.	H. H. Sloat, Weatherly,	6.98
1796		O. P. Beebe, Montrose,	
1264	Williams & Clark's Matchless Fertilizer 1916,	H. H. Sloat, Weatherly,	7.69
1822	Williams & Clark's Royal Phosphate 1916,	Henry J. Theis, Germania,	5.18
1266	Williams & Clark's Special Prolific Crop Producer,	H. H. Sloat, Weatherly,	9.45
1355		J. S. Moore & Son, Oakdale,	
1819		Henry J. Theis, Germania,	

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a=3/5 or more, b=2/5 to 3/5, c=2/5 or less of active insoluble nitrogen.

FERTILIZERS.—Continued.

NITROGEN.					PHOSPHORIC ACID.					POTASH.		Selling price per ton at place of selection.	Chemist's number.
Total.			Insoluble.		Total.		Available.						
Found.	Guaranteed.	Water soluble.	Active.	Inactive.	Found.	Guaranteed.	Found.	Guaranteed.	Insoluble.	Found.	Guaranteed.		
%	%	%	%	%	%	%	%	%	%	%	%	$	
1.90	1.65	0.76	b0.47	0.67	11.41	10.00	9.56	9.00	1.85	1.06	1.00	27 50	2358
0.88	0.82	0.56	a0.20	0.12	9.35	9.00	8.52	8.00	0.83	1.08	1.00	25 50	1697
2.34	2.47	1.67	a0.54	0.13	11.12	10.00	10.55	9.00	0.57	1.14	1.00	32 00	2490
1.25	0.82	0.59	b0.34	0.32	12.02	11.00	10.74	10.00	1.28	0.94	1.00	-------- 32 00 27 00	2136 2249 2597
2.00	2.06	1.30	a0.43	0.27	10.73	11.00	10.03	10.00	0.70	1.00	1.00	31 00	2495
0.90	0.82	0.41	b0.23	0.26	9.82	9.00	9.02	8.00	0.80	1.14	1.00	28 00 28 00 27 00	1348 2481 2598
1.09	0.82	0.56	b0.24	0.29	8.62	8.00	7.73	7.00	0.89	1.00	1.00	20 00	1524
1.47	1.23	0.74	b0.40	0.33	12.45	11.00	11.49	10.00	0.96	1.08	1.00	28 00 32 00	1248 1928
0.87	0.82	0.72	--------	------	9.18	9.00	8.73	8.00	0.45	1.18	1.00	25 00	1596
1.35	1.23	0.83	a0.36	0.16	11.91	11.00	10.25	10.00	1.66	1.12	1.00	29 00	1597
*2.09	2.47	1.40	a0.49	0.20	10.42	10.00	9.02	9.00	1.40	1.44	1.00	31 00	1032
1.69	1.65	0.94	a0.47	0.28	11.62	10.00	9.71	9.00	1.91	1.10	1.00	30 00	1269
1.00	0.82	0.53	a0.28	0.19	10.47	8.00	9.00	7.00	1.47	1.02	1.00	25 50	1268
0.96	0.82	0.53	b0.17	0.26	9.78	9.00	8.70	8.00	1.08	1.02	1.00	23 50	1758
1.01	0.82	0.59	b0.18	0.24	11.72	11.00	10.19	10.00	1.53	1.10	1.00	24 00	1757
1.31	1.23	0.80	a0.31	0.20	12.93	11.00	11.91	10.00	1.02	1.12	1.00	22 25	1658
1.84	1.65	1.21	a0.43	0.20	11.62	11.00	10.54	10.00	1.08	1.60	1.00	30 00	1051
2.27	2.05	1.49	a0.47	0.31	10.08	10.00	8.49	8.00	1.59	1.05	1.00	--------	1135
1.25	1.23	0.69	b0.25	0.31	12.30	11.00	10.71	10.00	1.59	1.14	1.00	25 75 34 00	1761 2174
1.08	0.82	0.65	b0.22	0.21	9.48	9.00	8.27	8.00	1.21	2.18	2.00	28 00	1759
1.69	1.65	0.76	b0.45	0.48	10.92	10.00	9.90	9.00	1.02	1.44	1.00	28 00 25 00 27 75	1948 2039 2053
0.98	0.82	0.26	c0.24	0.48	8.43	8.00	7.66	7.00	0.77	1.24	1.00	21 50 23 00	1498 2021
2.08	2.06	1.33	b0.42	0.33	9.78	9.00	8.03	8.00	1.75	1.08	1.00	30 00	1422
0.98	0.82	0.34	c0.22	0.42	10.04	9.00	9.02	8.00	1.02	1.06	1.00	25 00 23 50	1835 2052
1.72	1.65	0.76	b0.42	0.54	11.72	10.00	9.33	9.00	2.39	1.24	1.00	27 25	1760
1.40	1.23	0.96	b0.23	0.21	10.69	11.00	*9.61	10.00	1.08	0.86	1.00	27 00	1935
1.75	1.65	1.35	a0.29	0.11	10.97	11.00	10.52	10.00	0.45	1.18	1.00	30 00	1860
1.96	2.06	1.31	a0.44	0.21	10.55	11.00	10.00	10.00	0.55	1.28	1.00	35 00	1861
1.65	1.65	1.07	b0.32	0.26	12.19	11.00	10.98	10.00	1.21	1.04	1.00	32 00	2274
*2.43	3.29	1.44	a0.65	0.34	10.77	10.00	9.43	9.00	1.34	1.04	1.00	38 00	1267
2.24	2.06	1.53	a0.43	0.28	10.20	9.00	9.12	8.00	1.08	1.14	1.00	28 00 30 00	1797 2406
0.91	0.82	0.38	b0.31	0.22	11.24	11.00	*9.33	10.00	1.91	1.04	1.00	26 00	1265
1.05	0.82	0.37	b0.36	0.32	10.42	8.00	9.14	7.00	1.28	1.04	1.00	25 00 26 00	1263 1796
2.00	1.65	0.93	a0.72	0.35	11.02	10.00	9.43	9.00	1.59	1.22	1.00	30 00	1264
1.41	1.23	1.06	a0.28	0.07	11.86	11.00	10.23	10.00	1.63	1.14	1.00	27 00	1822
0.86	0.82	0.29	b0.27	0.30	9.95	9.00	8.74	8.00	1.21	1.04	1.00	25 50 25 00 25 00	1266 1355 1819

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*Deficient.

TABLE I.—COMPLETE

Chemist's number.	Name of Manufacturer and Brand.	Agent and Place of Sampling.	Moisture.
	AMERICAN FERTILIZING CO., BALTIMORE, MD.		%
1316	American Emergency Special Compound Guano,	H. W. Burg, East Prospect,	7.62
2100	American Fish and Bone Compound,	L. J. Denlinger, Lancaster,	9.33
2024	American Fish and Bone Compound Revised,	A. D. Brown, East Berlin,	5.99
2329		Musselman Brothers, New Holland,	
1168	American High Grade Special Compound Guano,	E. E. Kernagy, Vintage,	9.40
2261		G. W. Hoppie, Glenwood,	
2618	American Reliable Guano,	H. G. Tressler, Sand Patch,	5.65
1164	American Special Compound Guano,	James Elveston, Christiana,	8.77
1139	American Special Half Per Cent Formula,	Spangler & Stauffer, York,	5.74
	ARMOUR FERTILIZER WORKS, INC., BALTIMORE, MD.		
1030	Armour's 2-8-1,	M. L. Bachman, Lebanon,	6.18
1461		W. E. Ervin, Somerton,	
1551	Armour's 4-8-2,	Nazareth Coal & Lumber Co., Nazareth,	7.10
2187		E. W. Hyman & Thompson, Jersey Shore,	
1303	Crop Grower,	A. M. Grove & Co., Muddy Creek Forks,	8.46
1549		Nazareth Coal & Lumber Co., Nazareth,	
2122		Chester Grove, West Milton,	
1031	Farmers' Choice,	M. L. Bachman, Lebanon,	9.50
1359		Morrow & Buxton, Valencia,	
2485		S. C. Mensch, Marienville,	
1029	Grain Grower,	M. L. Bachman, Lebanon,	8.26
1302		A. M. Grove & Co., Muddy Creek Forks,	
1898		Yeager & Kennedy, Waynesburg,	
1173	Lancaster County Tobacco Grower,	H. S. Newcomer, Mt. Joy,	8.20
967	Wheat, Corn and Oats Special,	Nickels & Stewart, Shippensburg,	5.41
1694		S. S. Bryan, Titusville,	
2189		Thompson & Hyman, Jersey Shore,	
	ATLANTIC FERTILIZER WORKS—SWIFT & COMPANY, INC., OWNERS, BALTIMORE, MD.		
1573	Atlantic's Special Diamond "J",	Clyde Shipman, Hughesville,	3.35
	BAUGH & SONS COMPANY, BALTIMORE, MD.		
929	Baugh's Ammoniated Soluble Alkaline,	M. J. Sheffer, Hanover,	8.76
1519		R. D. Forman, Centre Hall,	
1999		Adolph Boettinger, Danville,	
1916	Baugh's Animal Base and Potash Compound for all Crops,	E. A. & J. L. Pennock, Chatham,	5.47
2155	Baugh's Balanced Plant Food: A Superior Fertilizer for General Use,	E. F. Seely, Nescopeck,	6.22
1005	Baugh's Complete Animal Base Fertilizer,	George Allyn, Warren Center,	7.00
1458		W. E. Ervin, Somerton,	
2380		N. S. Graybill, Richfield,	
1460	Baugh's Double Eagle Phosphate,	W. E. Ervin, Somerton,	6.26
1752		N. F. Reed, New Cumberland,	
1191	Baugh's Excelsior Guano,	S. H. Mohr, Coopersburg,	6.24
1459		W. E. Ervin, Somerton,	
1750		N. F. Reed, New Cumberland,	
958	Baugh's General Crop Grower: For All Crops,	D. M. Wertz & Co., Quincy,	8.23
1285		J. R. McDonald, New Bloomfield,	
1190	Baugh's High Grade Potato Grower "Big Potato" Brand,	S. H. Mohr, Coopersburg,	6.05
1840		M. R. Thomas, Somerfield,	
2133		Henry Smith, Lehighton,	
1193	Baugh's Peruvian Guano Substitute for Potatoes and all Vegetables,	S. H. Mohr, Coopersburg,	7.28
1998		Adolph Boettinger, Danville,	
2655		J. A. Seguine, Cresco,	

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a=3/5 or more, b=2/5 to 3/5, c=2/5 or less of active insoluble nitrogen.

FERTILIZERS.—Continued.

NITROGEN.					PHOSPHORIC ACID.					POTASH.		Selling price per ton at place of selection.	Chemist's number.
Total.			Insoluble.		Total.		Available.						
Found.	Guaranteed.	Water soluble.	Active.	Inactive.	Found.	Guaranteed.	Found.	Guaranteed.	Insoluble.	Found.	Guaranteed.		
%	%	%	%	%	%	%	%	%	%	%	%	$	
0.76	0.41	0.17	b0.24	0.35	8.83	8.00	7.36	7.00	1.47	†1.02	1.00	20 00	1316
1.92	1.65	1.08	b0.39	0.45	10.08	9.00	8.46	8.00	1.62	3.47	3.00	34 00	2100
1.68	1.65	0.61	b0.46	0.61	11.39	9.50	8.78	8.50	2.61	1.18	1.00	25 00 26 25	2024 2329
1.09	0.82	0.63	c0.17	0.29	8.62	8.00	8.30	7.00	0.32	*2.48	3.00	31 00 32 00	1168 2264
0.93	0.82	0.32	b0.25	0.36	9.94	9.00	8.15	8.00	1.79	1.00	1.00	22 50	2618
1.19	0.41	0.75	c0.15	0.29	9.69	8.00	7.90	7.00	1.79	3.08	3.00	29 00	1164
0.65	0.41	0.20	b0.19	0.26	9.38	9.00	7.94	8.00	1.44	0.64	0.50	18 00	1139
1.80	1.65	0.70	b0.45	0.65	9.46	8.50	7.99	8.00	1.47	1.12	1.00	28 75 29 00	1030 1461
3.23	3.29	2.07	b0.49	0.67	9.76	8.50	8.61	8.00	1.15	2.20	2.00	25 50 39 00	1551 2187
0.83	0.82	0.18	c0.15	0.50	9.27	8.50	8.38	8.00	0.89	2.18	2.00	26 00 26 75 26 35	1303 1549 2122
0.98	0.82	0.38	c0.18	0.42	10.94	9.50	9.54	9.00	1.40	2.92	3.00	34 75 35 00 40 00	1031 1359 2485
1.79	1.65	0.94	c0.30	0.55	9.54	8.50	8.14	8.00	1.40	2.02	2.00	32 75 30 00 36 00	1029 1302 1898
2.49	2.47	1.55	b0.38	0.56	10.19	8.50	8.53	8.00	1.66	2.90	3.00	42 50	1173
0.91	0.82	0.40	b0.21	0.30	8.32	7.50	7.75	7.00	0.57	1.14	1.00	24 00 25 00 21 00	967 1694 2189
0.47	0.41	0.07	b0.16	0.24	7.58	--------	7.07	7.00	0.51	0.72	0.50	19 00	1573
0.84	0.41	0.45	b0.16	0.23	14.72	--------	9.81	8.00	4.91	0.82	0.50	19 00 19 10 21 00	929 1519 1999
1.84	1.65	1.06	b0.31	0.47	12.11	--------	10.64	9.00	1.47	1.22	1.00	28 50	1916
1.65	1.65	0.94	b0.29	0.42	13.10	--------	11.02	10.00	2.08	1.00	1.00	--------	2155
1.68	1.65	0.74	b0.39	0.55	12.18	--------	10.20	10.00	1.98	1.34	1.00	28 00 30 00 --------	1005 1458 2380
2.81	1.65	2.03	b0.32	0.46	11.21	--------	9.23	8.50	1.98	1.28	1.00	29 00 28 50	1460 1752
1.24	1.02	0.55	b0.29	0.40	13.30	--------	11.07	10.00	2.23	1.16	1.00	27 00 27 00 26 00	1191 1459 1750
1.13	0.82	0.44	c0.24	0.45	10.96	--------	9.37	8.00	1.59	1.30	1.00	22 00 --------	958 1285
3.59	3.30	2.67	b0.40	0.52	10.78	--------	9.31	8.00	1.47	1.68	1.00	33 00 36 00 32 00	1190 1840 2133
*3.92	4.12	2.60	b0.56	0.76	10.49	--------	8.90	8.00	1.59	1.10	1.00	37 00 38 00 43 00	1193 1998 2666

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*Deficient.

†No. 1316 As muriate, 0.52%; as sulphate, 0.50%.

TABLE I.—COMPLETE

Chemist's number.	Name of Manufacturer and Brand.	Agent and Place of Sampling.	Moisture. %
956 1189 2094	Baugh's Special Potato Manure,	D. M. Wertz & Co., Quincy, S. H. Mohr, Coopersburg, M. S. Graybill & Son, Bareville,	7.58
2092	Baugh's The Wrapper Leaf Brand, A Special Manure for Seed Leaf Tobacco,	M. S. Graybill & Son, Bareville,	6.30
	BLATCHFORD CALF MEAL FACTORY, WAUKEGAN, ILL.		
1729	Barwell's Complete Lawn and Garden Fertilizer,	H. J. Klinger & Co., Butler,	5.60
	BOWKER FERTILIZER COMPANY, SUBSIDIARY OF THE AMERICAN AGRICULTURAL CHEMICAL CO., NEW YORK CITY, N. Y.		
1767	Bowker's All Round Fertilizer 1916,	John M. Stolzfus, Elverson,	6.25
1692 1829 2535	Bowker's Hill and Drill Phosphate 1916,	Kernochan & Co., Titusville, W. E. Mothersbaugh, Driftwood, H. L. Stultz & Bro., Altoona,	4.67
1728 2584	Bowker's Lawn and Garden Dressing 1916,	H. J. Klinger & Co., Butler, Reynoldsville Hardware Co., Reynoldsville,	4.82
1103 1892 2520	Bowker's Potato Phosphate 1916,	J. C. Mattern, Warriors Mark, W. H. McPeak, Hickory, Jones Brothers, Jackson Centre,	7.23
1856	Bowker's Staple Phosphate 1916,	Dorsey Brothers, West Brownsville,	6.55
1674 1825 1879	Bowker's Sure Crop Phosphate 1916,	J. R. Weaver, New Oxford, Bunker & Burdick, Millport, C. S. Hunter Co., Washington,	5.80
1828 2479	Stockbridge General Crop Manure 1916,	W. E. Mothersbaugh, Driftwood, M. Beshlin, Warren,	3.80
	THE CENTRAL CHEMICAL CO., THOMAS FERTILIZER WORKS, HAGERSTOWN, MD.		
972 1743	C. C. C. Phoenix,	Nickels & Stewart, Shippensburg, C. L. Bernheisel & Co., New Kingston.	4.07
	THE CHESAPEAKE CHEMICAL COMPANY, BALTIMORE, MD.		
1788	C. C. Co.'s Dissolved Guano,	Pat Quinn, Dushore,	3.94
2549	C. C. Co.'s Money Producer,	L. R. Over, Curryville,	7.82
	THE COE-MORTIMER COMPANY, SUBSIDIARY OF THE AMERICAN AGRICULTURAL CHEMICAL CO., NEW YORK, N. Y.		
1014	E. Frank Coe's Columbian Corn and Potato Fertilizer 1916,	C. J. Eastabrook & Son, Rummerfield,	11.18
1094 1345 2419	E. Frank Coe's Gold Brand Excelsior Guano 1916,	Murray & Co., Honesdale, The I. W. Scott Co., Pittsburgh, Charles Schoffstall, Valley View,	6.17
1015	E. Frank Coe's New Englander Special 1916,	C. J. Eastabrook & Son, Rummerfield,	9.05
1383	E. Frank Coe's Standard Potato Fertilizer 1916,	C. W. Fulkerson, Carbondale,	10.31
	COLUMBIA GUANO COMPANY, BALTIMORE, MD.		
2230	Columbia Fish, Phosphate and Potash,	S. R. Howell, Bloomsburg,	8.26
1242	Columbia Grain Special Fertilizer,	John P. Fisher, Douglassville,	6.77
1994 2355 2649	Columbia Wheat, Corn and Grass Special Fertilizer,	M. P. Whitenight, Bloomsburg, M. H. Maul, Thomasville, C. A. Schmucker, Friedens,	4.12

a=3/5 or more, b=2/5 to 3/5, c=2/5 or less of active insoluble nitrogen.

FERTILIZERS.—Continued.

NITROGEN.					PHOSPHORIC ACID.					POTASH.		Selling price per ton at place of selection.	Chemist's number.
Total.		Water soluble.	Insoluble.		Total.		Available.		Insoluble.				
Found.	Guaranteed.		Active.	Inactive.	Found.	Guaranteed.	Found.	Guaranteed.		Found.	Guaranteed.		
%	%	%	%	%	%	%	%	%	%	%	%	$	
2.08	1.65	1.33	b0.31	0.44	12.37	--------	10.27	10.00	2.10	1.22	1.00	28 00 27 00 26 00	956 1189 2094
3.59	3.30	2.86	b0.29	0.44	5.15	--------	4.38	3.50	0.77	1.14	1.00	30 00	2092
6.31	5.00	4.91	a0.91	0.49	13.14	--------	6.42	5.25	6.72	*0.20	1.50	65 00	1729
1.90	2.06	1.22	b0.39	0.29	11.65	11.00	10.76	10.00	0.89	1.02	1.00	--------	1767
2.75	2.47	1.90	a0.58	0.27	10.79	10.00	9.45	9.00	1.34	1.18	1.00	36 00 34 25 35 00	1692 1829 2535
4.66	4.11	3.59	b0.59	0.48	19.35	9.00	8.95	8.00	10.40	†1.58	1.00	65 00 45 00	1728 2584
2.05	1.65	1.57	a0.31	0.17	11.81	11.00	11.01	10.00	0.80	1.28	1.00	25 50 32 00 30 50	1103 1892 2520
1.15	0.82	0.64	b0.22	0.29	9.62	9.00	8.73	8.00	0.89	1.02	1.00	--------	1856
0.82	0.82	0.31	b0.22	0.29	12.04	11.00	10.96	10.00	1.08	1.72	1.00	23 50 27 00 29 00	1674 1825 1879
3.18	3.29	2.03	a0.72	0.43	10.91	10.00	9.12	9.00	1.79	1.14	1.00	38 00 45 00	1828 2479
0.67	0.41	0.23	c0.14	0.30	9.43	--------	8.54	8.00	0.89	†0.52	0.50	18 50 17 35	972 1743
1.14	0.82	0.26	c0.30	0.58	10.29	7.75	8.01	7.00	2.28	0.36	0.25	19 00	1788
1.53	0.82	0.92	b0.25	0.36	11.28	8.75	9.94	8.00	1.34	1.34	1.00	24 00	2549
1.43	1.23	1.01	a0.26	0.16	12.93	11.00	11.23	10.00	1.70	1.34	1.00	25 72	1014
2.40	2.47	1.60	a0.52	0.28	11.12	10.00	9.40	9.00	1.72	1.08	1.00	32 00 37 00 29 00	1094 1345 2419
0.94	0.82	0.56	a0.24	0.14	10.82	9.00	9.42	8.00	1.40	1.00	1.00	21 93	1015
*2.39	3.29	1.40	b0.57	0.42	12.02	10.00	10.23	9.00	1.79	1.08	1.00	35 00	1383
1.86	1.65	1.03	b0.35	0.48	9.85	8.50	8.77	8.00	1.08	†3.16	3.00	--------	2236
1.06	0.82	0.36	b0.31	0.39	10.27	8.50	9.19	8.00	1.08	1.90	2.00	27 00	1242
0.56	0.41	0.11	b0.18	0.27	9.95	9.00	8.03	8.00	0.96	†1.32	1.00	23 35 21 00 21 00	1994 2355 2649

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*Deficient.
†No. 1728 As muriate, 0.41%; as sulphate, 1.17%.
†No. 972 As muriate, 0.11%; as sulphate, 0.41%.
†No. 2230 As muriate, 0.40%: as sulphate, 2.76%.
†No. 1994 As muriate, 0.31%; as sulphate, 1.01%.

Chemist's number.	Name of Manufacturer and Brand.	Agent and Place of Sampling.	Moisture.
			%
	CONSUMERS CHEMICAL CORPORATION, NEW YORK, N. Y.		
1490 1628 2098	Consumer's Ammoniated Potash Compound,	J. R. Whitely, Forksville, J. G. Barr, Halton, Overley S. Good, New Holland,	5.06
1476	Consumer's Complete Compound,	P. S. Crandall, Alba,	5.08
1477	Consumer's Pure-Sure Fertilizer for General Use,	P. S. Crandall, Alba,	8.71
1092 2097 2389	Consumer's Pure-Sure Plant Food,	Murray & Co., Honesdale, Overly S. Good, New Holland, J. D. Graybill & Son, Belleville,	4.80
1009	Consumer's Pure-Sure Potato and Vegetable (With 1% Potash),	J. M. McNamara, Little Meadows,	8.13
	AMOS EBY & CO., LEAMAN PLACE, PA.		
2105	Pequea Valley Fertilizer,	S. Clayton Rauch, Leaman Place,	8.72
	ERIE REDUCTION CO., ERIE, PA.		
1707	General Crop Special,	W. D. Ripley, Wesleyville,	4.03
	EUREKA CHEMICAL COMPANY, BALTIMORE, MD.		
944 1906 2128	Eureka Fish and Potash,	N. E. Gobrecht & Bro., Hanover, C. C. Davis, Greensboro, F. L. Boyer, Middleburg,	4.62
	THE EUREKA FERTILIZER CO., LANCASTER, PA.		
1387	High Grade Trucker,	G. Moyer, Mt. Joy,	9.73
	FARMERS FERTILIZER, SEED & HIDE CO., WOMELSDORF, PA.		
2139	Grass and Grain Grower,	Luis Steigerwalt, Andreas,	5.82
	FARMERS FERTILIZER WORKS, ELIZABETHTOWN, PA.		
1412	Pride of Donegal,	W. B. Gochnauer, Lititz,	9.69
2095	Tobacco Special,	M. S. Graybill & Son, Bareville,	12.01
	GODFREY CO-OPERATIVE FERTILIZER & CHEMICAL CO., NEWARK, N. J.		
1814	Godfrey's Bumper Crop Producer,	Horn & Devling, Galeton,	6.95
	GRIFFITH & BOYD COMPANY, BALTIMORE, MD.		
1150 1226	Double Strength Tobacco Grower,	Willis Herr, Strasburg, A. L. Hartman, Schaefferstown,	7.20
1243	Economizer,	L. A. Geiger, Joanna,	4.24
1146 1427 2245	Farmers' Potato and Tomato,	Willis Herr, Strasburg, Passmore & Co., Nottingham, Dayton Milling Co., Dayton,	6.34
1027	Spring Crop Grower,	Frank Himmelberger, Annville,	6.57
1149	Truckers' Stable Manure,	Willis Herr, Strasburg,	6.00
1436	Truckers' Stable Manure,	Theo. S. Golder, West Chester,	5.19
	S. M. HESS & BROTHERS, INC., PHILADELPHIA, PA.		
1711 1877 2119	Big Crop Fertilizer, 1916,	Stow Lumber & Coal Co., Harbor Creek, W. G. Dague, Washington, Martin Slear, Northumberland,	6.40
1025	Farmers' General Fertilizer, 1916,	H. M. Hostetter, Campbelltown,	8.67

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a=3/5 or more, b=2/5 to 3/5, c=2/5 or less of active insoluble nitrogen.

FERTILIZERS.—Continued.

NITROGEN.					PHOSPHORIC ACID.					POTASH.		Selling price per ton at place of selection.	Chemist's number.
Total.			Insoluble.		Total.		Available.						
Found.	Guaranteed.	Water soluble.	Active.	Inactive.	Found.	Guaranteed.	Found.	Guaranteed.	Insoluble.	Found.	Guaranteed.		
%	%	%	%	%	%	%	%	%	%	%	%	$	
0.85	0.82	0.30	b0.25	0.30	8.99	8.50	8.42	8.00	1.53	1.20	1.00	21 35 22 00 24 00	1490 1628 2098
1.52	1.65	0.79	a0.47	0.26	10.45	9.00	9.39	8.00	1.06	2.00	2.00	30 00	1476
1.71	1.65	1.21	b0.24	0.26	10.75	9.00	9.39	8.00	1.36	2.94	3.00	34 00	1477
1.01	0.82	0.44	b0.32	0.25	9.72	9.00	8.00	8.00	1.72	†1.22	1.00	26 60 27 00 22 75	1092 2097 2389
3.29	3.29	2.26	a0.65	0.38	13.47	9.00	9.62	8.00	3.85	1.54	1.00	35 00	1009
*1.41	1.65	0.63	b0.32	0.46	12.88	11.00	11.02	10.00	1.86	1.08	1.00	27 50	2105
1.37	1.23	0.40	b0.42	0.55	10.50	9.00	7.69	7.00	2.81	1.18	1.00	24 70	1707
0.63	0.41	0.35	c0.10	0.18	8.64	8.50	8.26	8.00	0.38	0.46	0.25	18 50 24 00 17 00	944 1906 2128
1.79	1.65	1.44	b0.14	0.21	13.14	10.00	11.04	9.00	2.10	*†0.66	1.00	29 00	1387
4.76	4.12	1.22	b1.60	1.94	7.61	4.50	4.23	--------	3.38	0.68	0.37	35 00	2139
2.51	2.47	1.22	b0.52	0.77	9.76	8.00	7.72	7.00	2.04	†1.18	1.00	30 00	1412
3.48	3.29	2.01	b0.59	0.88	6.22	4.50	5.20	3.50	1.02	1.52	1.00	30 00	2095
1.08	0.82	0.63	b0.21	0.24	11.16	10.50	10.29	10.00	0.87	1.14	1.00	28 00	1814
2.38	2.45	1.17	b0.49	0.72	10.24	9.00	9.35	8.00	0.89	1.62	1.00	34 00 30 00	1150 1226
0.78	0.41	0.34	b0.18	0.26	8.30	7.00	6.51	6.00	1.79	0.56	0.50	--------	1243
1.52	1.25	0.91	c0.20	0.41	10.17	9.00	8.51	8.00	1.66	1.10	1.00	29 00 26 00 26 50	1146 1427 2245
1.74	1.65	0.88	b0.38	0.48	10.43	7.50	7.43	6.50	3.00	1.18	1.00	--------	1027
2.89	2.75	1.48	b0.63	0.78	8.87	6.00	7.78	5.00	1.59	*0.50	1.00	35 00	1149
*1.89	2.75	0.87	b0.47	0.55	8.36	6.00	7.20	5.00	1.16	*0.34	1.00	32 00	1436
1.76	1.65	1.23	a0.35	0.18	11.58	11.00	10.56	10.00	1.02	1.28	1.00	30 00 ------- 25 75	1711 1877 2119
1.09	0.82	0.69	a0.27	0.13	11.57	11.00	10.68	10.00	0.89	1.20	1.00	27 00	1025

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*Deficient.
†No. 1092 As muriate, 0.34%; as sulphate, 0.88%.
†No. 1387 As sulphate, 0.66%.
†No. 1412 As muriate, 0.31%; as sulphate, 0.87%.

Chemist's number.	Name of Manufacturer and Brand.	Agent and Place of Sampling.	Moisture.
			%
1871	Fish and Potash Manure, 1916,	T. G. Hager, Farmington,	5.34
1491	Keystone Phosphate,	Henry Fassett, Campbellsville,	6.16
1495		J. D. Cooper, Landisburg,	
1484	Potato Manure, 1916,	J. N. Morgan, Wheelersville,	7.04
1500		J. D. Cooper, Landisburg,	
2335		J. B. Wagner, Gilbertsville,	
1917	Reliable Potash Mixture, 1916,	Thomas J. Webb, Coatesville,	7.63
1362	Special Corn Manure, 1916,	Stoup & Baker, Valencia,	6.36
1919		Thomas J. Webb, Coatesville,	
2469		W. O. Beck, Warriors Mark,	
2461	Special High Grade Fertilizer, 1916,	Porter Brothers, Petersburg,	7.42
1290	Wheat and Grass Manure, 1916,	A. A. Hollenbaugh, Blain,	10.18
	THE HUBBARD FERTILIZER CO., BALTIMORE, MD.		
1582	Hubbard's English Compound,	E. A. Slagle, Paxinos,	2.66
1663		J. Emory Morel, Iron Ore,	
2630		Jeff Altfather, Berlin,	
1062	Hubbard's Farmers' I. X. L.,	William Shadle, Klingerstown,	5.87
2259		J. Harvey Miller, Ligonier,	
2393	Hubbard's Farmers' Phosphate,	H. M. Owens & Co., Lewistown,	4.10
	M. P. HUBBARD & CO., INC, BALTIMORE, MD.		
1245	Hubbard's Beat 'Em All Mixture,	L. A. Geiger, Joanna,	3.24
2017		Aspers Produce Co., Aspers,	
1691	Hubbard's Big Jim Compound,	Aspers Produce Co., Aspers,	4.64
2532		H. L. Orr, Tyrone,	
2354	Hubbard's Good and Cheap,	U. B. Stambaugh, Thomasville,	4.86
	INTERNATIONAL AGRICULTURAL CORPORATION (BUFFALO FERTILIZER WORKS), BUFFALO, N. Y.		
1637	Buffalo General Favorite,	J. G. Robbins, Port Allegany,	7.27
	THE JARECKI CHEMICAL CO., SANDUSKY, OHIO.		
2635	Lake Erie Guano with Phosphate and Potash,	S. S. Mosholder, Rockwood,	10.07
2634	Middle West Formula,	S. S. Mosholder, Rockwood,	11.90
1897	Number One Formula,	W. Z. Johnson, Amity,	10.94
	KEYSTONE BONE FERTILIZER CO., PHILADELPHIA, PA.		
2297	Keystone Corn and Cereal Grower,	J. P. Fisher, Boyertown,	9.56
2067	Keystone Grain and Grass Manure,	T. B. Luckey, Analomink,	7.92
2308		William Cassel, Hummelstown,	
2402		Charles Ebner, Easton,	
2066	Keystone Royal Corn and Potato Manure,	T. B. Luckey, Analomink,	7.87
2400		Charles Ebner, Easton,	
	KOLLER FERTILIZER CO., SEITZLAND, PA.		
2200	Koller's Electric Phosphate,	Summit Lumber Co., New Freedom,	8.38
2198	Koller's Potato Grower Phosphate,	Summit Lumber Co., New Freedom,	9.72

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a=3/5 or more, b=2/5 to 3/5, c=2/5 or less of active insoluble nitrogen.

FERTILIZERS.—Continued.

NITROGEN.					PHOSPHORIC ACID.					POTASH.		Selling price per ton at place of selection.	Chemist's number.
Total.			Insoluble.		Total.		Available.						
Found.	Guaranteed.	Water soluble.	Active.	Inactive.	Found.	Guaranteed.	Found.	Guaranteed.	Insoluble.	Found.	Guaranteed.		
%	%	%	%	%	%	%	%	%	%	%	%	$	
1.70	1.65	0.80	b0.53	0.37	11.44	10.00	8.83	9.00	2.61	1.06	1.00	28 00	1871
1.01	0.82	0.54	b0.22	0.25	10.50	9.00	9.35	8.00	1.15	1.26	1.00	28 00 22 50	1491 1495
*2.19	2.47	1.31	b0.47	0.41	11.08	10.00	9.87	9.00	1.21	1.80	1.00	31 50 -------- 34 00	1484 1500 2335
1.33	1.23	0.78	b0.31	0.24	12.13	11.00	11.24	10.00	0.89	1.12	1.00	--------	1917
1.24	0.82	0.65	b0.24	0.35	10.54	10.00	9.65	9.00	0.89	1.04	1.00	25 25 -------- 21 00	1362 1919 2469
*6.90	8.23	4.59	a1.57	0.74	7.30	6.00	6.63	5.00	0.64	1.14	1.00	52 00	2461
1.50	0.82	0.65	b0.38	0.47	11.71	10.00	9.41	9.00	2.30	1.02	1.00	--------	1290
1.77	0.82	1.14	b0.27	0.36	9.54	8.75	8.07	8.00	1.47	†1.06	1.00	24 00 24 00 23 00	1582 1663 2630
1.96	1.64	1.36	c0.18	0.42	10.31	8.75	8.40	8.00	1.91	†2.18	2.00	32 00 35 00	1062 2259
1.02	0.82	0.15	b0.35	0.52	10.31	7.75	8.27	7.00	2.04	0.48	0.25	22 00	2393
0.61	0.42	0.19	c0.12	0.30	10.37	9.50	9.41	8.00	0.96	†0.78	0.25	-------- 18 00	1245 2017
0.46	0.42	0.04	c0.11	0.31	10.49	9.50	8.90	8.00	1.59	1.30	1.00	21 00 22 50	1691 2532
1.00	0.83	0.56	b0.18	0.26	9.87	9.50	8.66	8.00	1.21	1.10	1.00	21 50	2354
1.01	0.80	0.43	b0.23	0.35	9.96	9.00	8.49	8.00	1.47	1.48	1.00	22 75	1637
1.19	1.25	0.54	c0.22	0.43	10.60	10.00	9.80	9.00	0.80	†1.02	1.00	24 50	2635
0.80	0.82	0.38	b0.17	0.25	14.40	13.00	12.30	12.00	2.10	1.34	1.00	24 25	2634
0.99	0.82	0.30	b0.28	0.41	11.01	10.00	10.28	9.00	0.73	†1.06	1.00	26 00	1897
1.64	1.65	0.92	b0.32	0.40	10.03	9.00	*7.35	8.00	2.68	2.06	2.00	30 75	2297
1.03	0.82	0.48	b0.22	0.33	8.60	8.00	7.71	7.00	0.89	1.38	1.00	24 00 -------- 21 00	2067 2308 2402
1.82	1.65	1.10	b0.31	0.41	12.23	12.00	10.70	10.00	1.53	†2.44	1.00	28 00 26 00	2066 2400
0.43	0.41	0.05	c0.09	0.29	12.18	9.50	11.16	9.00	1.02	0.60	0.50	16 50	2200
0.76	0.82	0.15	b0.29	0.32	10.59	7.50	8.61	7.00	1.98	*1.30	1.50	21 50	2198

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*Deficient.
†No. 1582 as muriate 0.16%; as sulphate 0.90%.
†No. 1062 as muriate 0.26%; as sulphate 1.92%.
†No. 1245 as muriate 0.16%; as sulphate 0.62%.
†No. 2635 as muriate 0.14%; as sulphate 0.88%.
†No. 1897 as muriate 0.27%; as sulphate 0.79%.
†No. 2066 as muriate 0.65%; as sulphate 1.79%.

TABLE I.—COMPLETE

Chemist's number.	Name of Manufacturer and Brand.	Agent and Place of Sampling.	Moisture.
			%
	LANCASTER BONE FERTILIZER COMPANY, LANCASTER, PA.		
1408	Connecticut Tobacco Wrapper Grower,	E. G. Geyer, Brunersville,	7.26
1295	Special Guano,	Josiah Flinchbaugh, Windsor,	3.09
1409	Potato, Fruit and Vegetable,	E. G. Geyer, Brunersville,	4.11
1407	Potato, Tobacco and Truck Manure,	E. G. Geyer, Brunersville,	7.06
	LANCASTER CHEMICAL, CO., LANCASTER, PA.		
2104	No. 3 Dissolved Animal Bone and Potash,	E. B. Ruhl & Son, Manheim,	11.21
1400 1977	No. 19 Potato Special,	I. E. Patton, Lancaster, F. L. Pfeifley, Lynnport,	7.53
2091	No. 1 Tobacco and Vegetable,	H. M. Stauffer, Leola,	7.78
	LEBANON FERTILIZER WORKS, LEBANON, PA.		
1047	Levan's Full Strength Top Dresser for Grass,	Hegins Grange, Hegins,	7.05
2363	Levan's Full Strength Top Dresser for Grass,	Artic Bittner, Catawissa,	7.57
1022 1251 1390	Levan's General Crop Grower Fertilizer,	C. U. Horst, Palmyra, Ed. Mayberry, Pine Grove, L. W. Mumma, Jr., Florin,	8.46
1252 1389 2237	Levan's Potato and Tobacco Fertilizer,	Harry Keffer, Pine Grove, L. W. Mumma, Jr., Florin, Artie Bittner, Catawissa,	6.65
1048 2239 2299	Levan's Royal Potash Compound Fertilizer.	Hegins Grange, Hegins, Artie Bittner, Catawissa, A. B. Bomgardner, Palmyra,	9.46
1028 1057 2238	Levan's Special Corn and Wheat Fertilizer,	Lebanon Hardware Co., Lebanon, Hegins Grange, Hegins, Artie Bittner, Catawissa,	8.45
	LISTER'S AGRICULTURAL CHEMICAL WORKS, NEWARK, N. J.		
1357 1386 1404	Lister's Corn and Potato Fertilizer, 1916,	Bortz Hardware Co., Greensburg, H. W. Deeker, Preston Park, J. Frank Lutz, Steevns,	8.80
1294	Lister's 1-8-2 Fertilizer,	W. L. Mitzel, Red Lion,	7.02
1274	Lister's Harvest Queen Phosphate, 1916,	W. H. Fogelsonger, Shippensburg,	8.61
1358 1864 2466	Lister's Pennsylvania Special, 1916,	Bortz Hardware Co., Greensburg, S. J. Ringler, Elk Lick, Ben Everhart, Franklinville,	7.19
1165 1196 2424	Lister's Perfect Potato Manure, 1916,	Landis Brackbill, Kinzer, R. D. Sames, Coopersburg, William L. Fehn, Pine Grove,	8.95
1194 1326 2512	Lister's Potato and Corn No. 2 Fertilizer, 1916.	R. D. Sames, Coopersburg, Jacob Bowser, Osterburg, J. R. Hanks, Springboro,	9.00
1309 1385 2190	Lister's Special Crop Producer, 1916,	W. L. Mitzel, Red Lion, H. W. Deeker, Preston Park, Bert Wentz, Jersey Shore,	5.36
1260	Lister's Standard Pure Superphosphate of Lime, 1916,	Ralph Eroh, Weatherly,	10.63
1346 2507	Lister's Success Fertilizer, 1916,	R. J. Toepfer, Tarentum, F. F. Harrison, Edinboro,	9.21
1954 2006	Lister's U. S. Superphosphate, 1916,	Wm. H. Fritz, Berwyn, B. Savidge, Turbotville,	9.08
1384 1649 2577	Lister's Valley Brand Fertilizer, 1916,	H. W. Deeker, Preston Park, W. H. Schriver, Dillsburg, J. T. Murphy, Clearfield,	7.38

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a=3/5 or more, b=2/5 to 3/5, c=2/5 or less of active insoluble nitrogen.

FERTILIZERS.—Continued.

NITROGEN.					PHOSPHORIC ACID.					POTASH.		Selling price per ton at place of selection.	Chemist's number.
Total.			Insoluble.		Total.		Available.						
Found.	Guaranteed.	Water soluble.	Active.	Inactive.	Found.	Guaranteed.	Found.	Guaranteed.	Insoluble.	Found.	Guaranteed.		
%	%	%	%	%	%	%	%	%	%	%	%	$	
1.66	1.60	1.21	c0.10	0.35	8.97	9.00	8.55	8.00	0.42	†2.88	3.00	42 00	1408
0.80	0.82	0.44	b0.19	0.17	9.27	9.00	8.57	8.00	0.70	0.90	0.50	--------	1295
0.88	0.82	0.53	c0.10	0.25	8.06	8.00	7.23	7.00	0.83	†0.94	1.00	27 00	1409
1.60	1.60	1.24	b0.14	0.22	9.16	9.00	8.46	8.00	0.70	†1.18	1.00	30 00	1407
1.76	1.65	1.34	b0.21	0.21	9.75	11.00	*6.60	10.00	3.15	*†0.26	1.00	30 00	2104
1.88	1.65	1.33	b0.23	0.32	11.39	10.00	10.11	9.00	1.28	1.04	1.00	30 00 29 00	1400 1977
2.45	2.06	1.65	a0.49	0.31	13.02	8.50	10.75	7.50	2.27	*†0.46	1.00	33 00	2091
*5.58	7.38	4.77	b0.35	0.46	7.74	6.00	6.29	5.00	1.45	*1.55	2.00	45 00	1047
*5.95	7.38	5.12	b0.37	0.46	6.89	6.00	5.79	5.00	1.10	2.04	2.00	45 85	2363
0.88	0.82	0.32	c0.17	0.39	8.67	8.00	7.59	7.00	1.08	1.44	1.00	------- 22 75 21 75	1022 1251 1390
1.31	1.23	0.74	c0.19	0.38	10.17	10.00	9.21	9.00	0.96	3.10	3.00	------- 31 00 29 00	1252 1389 2237
1.55	1.64	0.95	b0.27	0.33	9.87	9.00	8.47	8.00	1.40	2.16	2.00	25 50 26 60 29 00	1048 2239 2299
0.92	0.82	0.37	c0.21	0.34	9.17	9.00	8.09	8.00	1.08	2.18	2.00	26 00 22 50 22 80	1028 1057 2238
2.11	2.06	1.37	b0.43	0.31	9.55.	9.00	8.08	8.00	1.47	1.24	1.00	36 00 30 75 28 50	1357 1386 1404
1.10	0.82	0.62	b0.20	0.28	9.35	9.00	8.20	8.00	1.15	*1.80	2.00	27 00	1294
1.38	1.23	0.76	b0.29	0.33	12.45	11.00	10.09	10.00	2.36	1.06	1.00	26 50	1274
1.10	0.82	0.49	c0.23	0.38	11.00	10.00	10.04	9.00	0.96	1.00	1.00	30 00 24 00 22 00	1358 1864 2463
*2.99	3.29	2.02	b0.48	0.49	11.24	10.00	9.65	9.00	1.59	1.28	1.00	32 50 35 00 -------	1166 1196 2424
2.04	2.06	1.21	b0.39	0.44	12.37	11.00	10.20	10.00	2.17	1.38	1.00	30 00 27 90 29 75	1194 1326 2512
1.06	0.82	0.28	b0.36	0.42	10.22	9.00	8.94	8.00	1.28	1.08	1.00	23 00 25 25 24 00	1309 1385 2190
2.61	2.47	1.68	b0.50	0.43	11.86	10.00	8.86	9.00	3.00	1.00	1.00	29 60	1260
1.38	1.23	0.63	b0.36	0.39	12.03	11.00	11.20	10.00	0.83	1.26	1.00	29 00 27 55	1346 2507
1.29	1.23	0.66	b0.26	0.37	12.40	11.00	11.00	10.00	1.40	1.08	1.00	29 00 24 50	1954 2006
1.29	0.82	0.64	b0.26	0.39	11.94	11.00	10.98	10.00	0.96	1.08	1.00	26 25 25 00 28 00	1384 1649 2577

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*Deficient.
†No. 1408 as muriate 0.61%; as sulphate 2.27%.
†No. 1409 as sulphate 0.94%.
†No. 1407 as muriate 0.21%; as sulphate 0.97%.
†No. 2104 as sulphate 0.26%.
†No. 2091 as sulphate 0.46%.

TABLE I.—COMPLETE

Chemist's number.	Name of Manufacturer and Brand.	Agent and Place of Sampling.	Moisture.
			%
	FREDERICK LUDLAM CO., SUBSIDIARY OF THE AMERICAN AGRICULTURAL CO., BALTIMORE, MD.		
1140	Ludlam's Cecrops Fertilizer, A. B. F. Brand, 1916,	Sechrist & Ihrig, York,	7.93
1291	Ludlam's Cecrops Fertilizer, All Crop Fertilizer, 1916,	George Beistline, Alinda,	10.85
1293	Ludlam's Cecrops Fertilizer, C. & G. Brand, 1916,	James H. Rice, Alinda,	7.01
1496	Ludlam's Cecrops Fertilier, Harvest Queen, 1916,	Amos L. Dunn, Landisburg,	7.93
	THE MAPES FORMULA & PERUVIAN GUANO CO., NEW YORK, N. Y.		
1399	Mapes General Special (1916 Brand),	James K. Shultz, Washingtonboro,	5.37
2069		A. J. Wolfe, E. Stroudsburg,	
1410	Mapes Potato Manure (1916 Brand),	W. H. Muth & Co., Lititz,	7.40
2170		P. H. Updegrave, Valley View,	
2670		A. J. Wolfe, E. Stroudsburg,	
1388	Mapes Tobacco Starter, Improved,	G. Moyer, Mt. Joy,	6.95
1959	Mapes Top Dresser, Full Strength (1916 Brand),	Hilles & Taggart, Norristown,	4.70
2415		A. F. Kimmel, Orwigsburg,	
	THE MARTIN FERTILIZER CO., PHILADELPHIA, PA.		
1961	Martin's Bull Head Fertilizer,	S. K. Chambers & Bro., Elkview,	4.29
1158	Martin's 7% Guano,	Elias Harrington, West Willow,	7.75
1018	Martin's Sure Grower,	Wysox Produce Co., Wysox,	4.52
	HENRY F. MITCHELL CO., PHILADELPHIA, PA.		
2403	Mitchell's High Grade Ammoniated Phosphate.	E. P. Gallagher, South Bethlehem,	4.64
	FRANK P. MILLER, SPRINGTOWN, PA.		
2408	Farmers' Choice Fertilizer,	Frank P. Miller, Springtown,	8.21
	THE MILLER FERTILIZER CO., BALTIMORE, MD.		
2030	Ammoniated,	L. F. Hildebrand, Loganville,	7.07
932	Club Brand,	Charles G. Carbaugh, Hanover,	8.03
1562		Alvin Wanner, Fogelsville,	
2493		John Phelps, Sugar Grove,	
1561	Harvest Queen,	Alvin Wanner, Fogelsville,	7.73
1634	Hustler Phosphate,	J. Emory Morel, Iron Ore,	4.61
1152	Potato and Vegetable Grower,	Eli Witmer, Lampeter,	8.78
1563		Alvin Wanner, Fogelsville,	
1579		H. L. Ort, Pennsdale,	
1310	Special Mixture,	F. H. Shenberger, Red Lion,	7.80
	NASSAU FERTILIZER CO., SUBSIDIARY OF THE AMERICAN AGRICULTURAL CHEMICAL CO., NEW YORK, N. Y.		
1804	General Favorite Fish Mixture,	I. J. Witter, Jackson,	10.16
2211	Plow Brand, 1916,	J. H. Bartenslager, Stewartstown,	6.45
1790	Potato Manure, 1916,	John Hamer, Dushore,	10.00

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a=3/5 or more, b=2/5 to 3/5, c=2/5 or less of active insoluble nitrogen.

FERTILIZERS.—Continued.

NITROGEN.					PHOSPHORIC ACID.					POTASH.		Selling price per ton at place of selection.	Chemist's number.
Total.			Insoluble.		Total.		Available.						
Found:	Guaranteed.	Water soluble.	Active.	Inactive.	Found.	Guaranteed.	Found.	Guaranteed.	Insoluble.	Found.	Guaranteed.		
%	%	%	%	%	%	%	%	%	%	%	%	$	
1.74	1.65	0.74	b0.51	0.49	11.35	10.00	9.63	9.00	1.72	1.08	1.00	26 00	1140
1.07	0.82	0.61	b0.19	0.27	11.80	11.00	10.33	10.00	1.47	1.14	1.00	17 75	1291
0.56	0.41	0.33	b0.11	0.12	9.45	9.00	8.56	8.00	0.89	†0.98	1.00	20 00	1293
0.90	0.82	0.44	b0.21	0.25	10.18	9.00	9.10	8.00	1.08	1.30	1.00	22 25	1496
6.13	5.76	5.02	b0.58	0.53	9.17	8.00	6.36	6.00	2.81	†2.40	1.00	46 00 42 00	1399 2069
*3.45	3.71	2.93	c0.19	0.33	9.43	10.00	*7.77	8.00	1.66	1.42	1.00	42 00 -------- 45 00	1410 2170 2670
4.12	4.12	3.52	a0.40	0.20	8.66	8.00	6.01	6.00	2.65	1.40	1.00	45 00	1388
9.69	9.88	9.11	b0.26	0.32	8.99	8.00	7.27	5.00	1.72	2.61	1.00	69 00 65 00	1959 2415
2.67	2.47	1.81	b0.38	0.48	13.51	--------	11.28	8.00	2.23	†1.06	1.00	30 00	1961
6.09	5.76	5.19	b0.44	0.46	7.28	--------	6.00	6.00	1.28	1.08	1.00	42 00	1158
1.13	0.82	0.52	b0.34	0.27	13.46	--------	9.48	8.00	3.98	*0.76	1.00	23 00	1018
1.90	1.65	1.14	b0.42	0.34	11.93	--------	9.44	8.50	2.49	†1.34	1.00	--------	2403
*1.75	2.00	0.14	b0.65	0.96	9.64	9.75	*7.60	8.00	2.04	*†0.27	1.00	27 00	2408
1.52	1.34	0.88	c0.23	0.41	8.90	8.50.	8.01	8.00	0.89	0.72	0.50	22 00	2030
0.65	0.41	0.37	b0.14	0.14	8.56	8.50	8.30	8.00	0.26	0.78	0.50	18 00 18 00 21 00	932 1562 2493
1.41	1.03	1.00	c0.13	0.28	8.36	8.50	7.98	8.00	0.38	1.14	0.75	24 00	1561
1.08	0.82	0.60	b0.19	0.29	9.80	8.50	8.91	8.00	0.89	†1.00	0.50	20 00	1664
1.68	1.65	1.13	b0.23	0.32	9.22	8.50	8.20	8.00	1.02	1.32	1.00	26 80 24 00 27 50	1152 1563 1579
0.91	0.82	0.38	c0.15	0.38	10.04	8.50	8.36	8.00	1.68	†2.28	2.00	--------	1310
2.18	1,23	1.23	a0.63	0.32	12.21	11.00	10.49	10.00	1.72	1.06	1.00	26 25	1804
1.89	1.65	1.12	b0.35	0.42	11.08	10.00	9.46	9.00	1.62	1.06	1.00	27 00	2211
1.98	2.06	1.38	a0.41	0.19	10.18	9.00	9.54	8.00	0.64	1.04	1.00	28 50	1790

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*Deficient.
†No. 1293 as muriate 0.62%; as sulphate 0.36%.
†No. 1399 as muriate 0.47%; as sulphate 1.93%.
†No. 1961 as muriate 0.25%; as sulphate 0.81%.
†No. 2403 as muriate 0.20%; as sulphate 1.14%.
†No. 2408 as muriate o.09%; as sulphate 0.18%.
†No. 1664 as muriate 0.73%; as sulphate 0.27%.
†No. 1310 as muriate 0.52%; as sulphate 1.76%.

Chemist's number.	Name of Manufacturer and Brand.	Agent and Place of Sampling.	Moisture.
			%
1485	Special Manure, 1916,	Christian Hintz, Forksville,	7.00
1546		John N. Landis, Quakertown,	
1960		D. H. O'Brian, Kelton,	
1112	Wheat and Grass Grower, 1916,	John Dubbs, Bellefonte,	8.53
1805		I. J. Witter, Jackson,	
	G. OBER & SONS COMPANY, BALTIMORE, MD.		
2626	Ober's Half and Half Mixture,	N. B. Shober, Garret,	4.93
2086	Ober's Red King Guano,	Miller & Bushong, Rohrerstown,	9.56
	OYLER & SPANGLER FERTILIZER WORKS, INC., GETTYSBURG, PA.		
1686	Gettysburg,	Biglerville Warehouse Co., Biglerville.	5.50
	PATAPSCO GUANO COMPANY, BALTIMORE, MD.		
947	Coon Brand Guano, 1916,	H. P. Kocher, Wrightsville,	7.86
1203		George M. Walter, Milton,	
1331		Francis Baker, Everett,	
2071	Grange Mixture, 1916,	Turn & Cook, Bushkill,	8.85
1278	Patapsco B. B. & P. Brand, 1916,	Charles Bruner, New Bloomfield,	4.88
1891		Denny & Allison, Hickory,	
1089	Patapsco Columbian Guano for Truck, Potatoes and Tobacco, 1916,	G. Smith & Sons, Seeleyville,	10.13
1808		C. F. Lewis, Susquehanna,	
1882	Patapsco Corn and Tomato Fertilizer, 1916	Russel Brothers, Washington,	7.09
2062		Joseph Burkholder, Hummelstown,	
2110		J. H. Moyer, Mifflinburg,	
1279	Patapsco General Crop Producer,	Charles Bruner, New Bloomfield,	6.96
1087	Patapsco Money Maker, 1916,	G. Smith & Sons, Seeleyville,	7.10
1204	Patapsco Special Early Trucker, 1916,	George M. Walter, Milton,	8.26
1076	Patapsco Special Potato Manure, 1916,	John D. Williams, Moscow,	8.52
1277		Charles Bruner, New Bloomfield,	
1721		J. J. Kennedy, Zelienople,	
1810	Patapsco Special Prolific Potato Phosphate,	C. F. Lewis, Susquehanna,	11.86
1284	Patapsco Tobacco and Potato Fertilizer, 1916,	Charles Bruner, New Bloomfield,	7.69
1283	Sea Gull Guano,	Charles Bruner, New Bloomfield,	6.72
	PIEDMONT MT. AIRY GUANO CO., BALTIMORE, MD.		
1039	Piedmont Leader Fertilizer,	Amos Kreider, Ono,	6.75
	PITTSBURGH PROVISION & PACKING CO., PITTSBURGH, PA.		
1884	Keystone Fertilizer,	George B. Sprowls, Claysville,	3.74
1890		W. H. Dunlap, Jr., Canonsburg,	
	THE POLLOCK FERTILIZER CO., SUBSIDIARY OF THE AMERICAN AGRICULTURAL CHEMICAL CO., BALTIMORE, MD.		
913	Corn and Oats Special, 1916,	J. G. Hall, New Providence,	3.72
2622		A. C. Beal, Sand Patch,	
2647		Webster W. Barron, Friedens,	
2646	Corn, Wheat and Tomato Guano, 1916,	Webster W. Barron, Friedens,	6.50
909	Special Potato and Tobacco Fertilizer, 1916,	J. G. Hall, New Providence,	7.88

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a=3/5 or more, b=2/5 to 3/5, c=2/5 or less of active insoluble nitrogen.

FERTILIZERS.—Continued.

NITROGEN.					PHOSPHORIC ACID.					POTASH.		Selling price per ton at place of selection.	Chemist's number.
Total.			Insoluble.		Total.		Available.						
Found.	Guaranteed.	Water soluble.	Active.	Inactive.	Found.	Guaranteed.	Found.	Guaranteed.	Insoluble.	Found.	Guaranteed.		
%	%	%	%	%	%	%	%	%	%	%	%	$	
1.08	0.82	0.65	b0.24	0.19	12.32	11.00	11.43	10.00	0.89	1.48	1.00	28 00 24 00 22 50	1485 1546 1960
0.92	0.82	0.32	b0.24	0.36	9.82	9.00	9.05	8.00	0.77	0.94	1.00	23 00 23 50	1112 1805
0.90	0.41	0.36	b0.22	0.32	9.73	8.00	8.33	7.00	1.40	1.15	0.50	17 75	2626
2.78	2.47	1.89	b0.41	0.48	10.52	9.00	8.80	8.00	1.72	†1.60	1.00	32 00	2086
*0.83	1.65	0.27	b0.23	0.33	13.04	--------	10.62	10.00	2.42	*0.26	1.00	19 00	1686
1.23	0.82	0.71	b0.21	0.31	10.82	10.00	9.67	9.00	1.15	1.02	1.00	22 50 23 00 23 00	947 1203 1331
1.77	1.65	1.01	a0.48	0.28	11.70	10.00	10.42	9.00	1.28	1.08	1.00	30 75	2071
0.59	0.41	0.17	c0.15	0.27	9.85	9.00	9.02	8.00	0.83	1.00	1.00	21 00 26 00	1278 1891
2.45	2.47	1.70	b0.45	0.30	11.86	10.00	10.58	9.00	1.28	1.24	1.00	32 50 32 50	1089 1808
1.36	1.23	0.68	b0.31	0.37	12.25	11.00	10.72	10.00	1.53	1.10	1.00	30 00 25 00 26 00	1882 2062 2110
1.10	0.82	0.54	c0.21	0.35	8.53	8.00	7.64	7.00	0.89	1.18	1.00	22 50	1279
0.95	0.82	0.62	a0.25	0.08	10.72	9.00	9.38	8.00	1.34	0.94	1.00	24 00	1087
4.01	4.11	2.86	a0.72	0.43	10.13	9.00	8.92	8.00	1.21	†1.10	1.00	38 00	1204
1.77	1.65	1.33	a0.30	0.14	12.31	11.00	11.03	10.00	1.28	1.18	1.00	28 25 28 00 30 00	1076 1277 1721
*3.04	3.29	1.99	a0.67	0.38	11.62	11.00	10.13	10.00	1.49	3.08	3.00	47 00	1810
2.25	2.06	1.55	b0.39	0.31	9.95	9.00	7.81	8.00	2.14	†1.20	1.00	28 50	1284
1.06	0.82	0.56	b0.20	0.30	9.50	9.00	8.61	8.00	0.89	1.10	1.00	23 00	1283
*3.01	3.29	1.81	b0.65	0.55	9.76	--------	8.29	8.00	1.47	1.46	1.00	33 00	1039
1.75	1.43	0.72	b0.48	0.55	11.84	11.00	9.48	9.00	2.36	1.70	1.00	30 00 32 00	1884 1890
0.77	0.41	0.37	b0.17	0.23	9.36	9.00	7.89	8.00	1.47	1.00	1.00	24 00 26 00 20 50	913 2622 2647
1.00	0.82	0.62	b0.19	0.19	9.85	9.00	9.06	8.00	0.79	1.00	1.00	22 40	2616
2.17	2.06	1.36	b0.46	0.35	9.99	9.00	8.14	8.00	1.85	1.12	1.00	29 75	909

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*Deficient.
†No. 2086 as muriate 0.36%; as sulphate 1.24%.
†No. 1204 as muriate 0.37%; as sulphate 0.73%.
†No. 1284 as muriate 0.52%; as sulphate 0.68%.

TABLE I.—COMPLETE

Chemist's number.	Name of Manufacturer and Brand.	Agent and Place of Sampling.	Moisture.
			%
	RASIN-MONUMENTAL COMPANY, BALTIMORE, MD.		
1456	Rasin's Emergency Royal Fish Bone and Potash,	E. H. Keen & Co., Parkesburg,	7.61
2035	Rasin's Half and Half Special,	A. C. Taylor, Glenville,	4.51
2395		John Shirey, Lewistown,	
2019	Rasin's Quality Compound,	Aspers Produce Co., Aspers,	8.67
2375	Rasin's Royal Manure,	A. D. Kramer, Kreamer,	5.50
2225	Rasin's United Grain Grower,	H. B. Low & Son, Orangeville,	8.51
1455	Wm. Penn Crop Grower,	E. H. Keen & Co., Parkesburg,	4.83
1619		Leonard Ritter, St. Marys,	
2227		H. B. Low & Son, Orangeville,	
	READING BONE FERTILIZER COMPANY, READING, PA.		
2304	Farmers' Tankage and Potash for Corn, Grain and Grass,	C. R. Bucher, Myerstown,	5.60
1467	Blood, Meat and Potash Mixture,	Carl S. Garner, Hatboro,	5.45
	READING CHEMICAL COMPANY, READING, PA.		
1040	Complete Fertilizer,	Jacob Meck, Meckville,	3.35
1622		Leonard Ritter, St. Marys,	
1834		Albert C. Myers, Lock Haven,	
1339	Old Standard,	Everett Hardware Co., Everett,	4.95
2178		H. L. McCloskey, Beech Creek,	
	ROBERT A. REICHARD, ALLENTOWN, PA.		
1182	Gilt Edge Phosphate,	E. J. Gerlauch, Bethlehem,	5.46
1783		Robert A. Reichard, Allentown,	
2141		Reuben Kamerer, Andreas,	
1177	Special Manure,	William Mittman, Easton,	5.25
1183		E. J. Gerlauch, Bethlehem,	
2137		Harry Lentz, Palmerton,	
	REICHARD HIDE & TALLOW CO., ASHLAND, PA.		
1037	Reichard's Special,	Victor Herring, Pitman,	3.81
2236	Reichard's Special,	Fred H. Craig, Catawissa,	4.26
	F. S. ROYSTER GUANO COMPANY, BALTIMORE, MD.		
1831	Royster's Cuckoo Crop Grower,	Albert C. Myers, Lock Haven,	3.67
1887		W. H. Dunlap, Jr., Canonsburg,	
2040		J. F. & H. O. Newhouse, Glen Rock,	
1832	Royster's Dreadnought Fertilizer,	Albert C. Myers, Lock Haven,	6.69
1377	Royster's Drillwell Phosphate,	F. C. Devenny, Forrest City,	4.81
2109		John H. Strickler, Mifflinburg,	
1478	Royster's Fish, Flesh and Fowl,	Preston Brothers, Canton,	6.74
1868		J. M. Kunkle, Farmington,	
1901		T. M. Smith, Jefferson,	
996	Royster's Logical Compound,	Brennan & Swan, Nelson,	3.66
1247		Thomas Kuntzleman, Tower City,	
1746		N. F. Reed, New Cumberland,	
1578	Royster's Pennsylvania Potato Special Fertilizer,	James Myers' Sons, Hughesville,	5.16
1731		Mars Milling & Feed Co., Mars,	
2213		S. A. Barshinger, Red Lion,	

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a=3/5 or more, b=2/5 to 3/5, c=2/5 or less of active insoluble nitrogen.

FERTILIZERS.—Continued.

NITROGEN.					PHOSPHORIC ACID.					POTASH.		Selling price per ton at place of selection.	Chemist's number.
Total.			Insoluble.		Total.		Available.						
Found.	Guaranteed.	Water soluble.	Active.	Inactive.	Found.	Guaranteed.	Found.	Guaranteed.	Insoluble	Found.	Guaranteed.		
%	%	%	%	%	%	%	%	%	%	%	%	$	
1.70	1.65	0.65	b0.52	0.53	11.00	9.50	8.68	8.50	2.32	1.08	1.00	27 00	1456
0.69	0.41	0.03	c0.20	0.46	9.15	9.00	7.81	8.00	1.34	†0.76	0.50	17 00 30 00	2035 2395
1.07	0.82	0.56	c0.15	0.36	8.67	8.00	7.39	7.00	1.28	2.94	3.00	-------	2019
0.70	0.41	0.21	c0.16	0.33	9.75	9.00	8.35	8.00	1.40	1.00	1.00	20.00	2375
0.92	0.82	0.38	c0.16	0.38	10.84	9.00	8.74	8.00	2.10	†2.16	2.00	26 50	2225
1.01	0.82	0.30	c0.23	0.48	10.09	9.00	8.69	8.00	1.40	1.08	1.00	23 00 22 00 21 50	1455 1619 2227
1.14	0.82	0.95	-------	------	11.00	11.00	10.81	10.00	0.19	1.20	1.00	24 50	2304
1.83	1.64	1.40	b0.23	0.20	9.48	9.00	8.91	8.00	0.57	1.86	2.00	34 50	1467
0.95	0.82	0.23	b0.29	0.43	9.18	9.00	8.22	8.00	0.96	†1.08	1.00	22 50 25 00 24 50	1040 1622 1834
1.79	1.64	1.03	b0.33	0.43	9.40	9.00	8.32	8.00	1.08	2.04	2.00	30 00 32 00	1339 2178
1.10	0.82	0.20	b0.37	0.53	9.46	9.00	8.31	8.00	1.15	1.96	1.50	30 00 ------- -------	1182 1783 2141
3.32	3.28	0.97	b1.35	1.00	9.24	7.00	6.18	6.00	3.06	2.50	2.00	38 00 40 00 34 00	1177 1183 2137
*3.20	3.70	0.57	b1.48	1.15	17.53	--------	*11.41	17.00	6.12	*†0.24	0.50	31 00	1067
*3.17	3.70	0.47	b1.56	1.14	17.13	--------	*11.20	17.00	5.93	*†0.23	0.50	31 00	2236
0.85	0.82	0.28	b0.23	0.34	8.97	8.50	8.22	8.00	0.70	1.18	1.00	25 50 26 00 -------	1831 1887 2040
1.79	1.65	1.06	b0.35	0.38	9.58	8.50	8.37	8.00	1.21	2.32	2.00	35 00	1832
3.07	2.47	1.27	b0.77	1.03	10.24	8.50	9.04	8.00	1.20	†1.60	1.00	32 00 28 40	1377 2109
1.86	1.65	1.09	b0.33	0.44	9.64	8.50	8.87	8.00	0.77	3.34	3.00	35 50 ------- 40 00	1478 1868 1901
1.89	1.65	0.96	b0.43	0.50	9.20	8.50	8.50	8.00	0.70	1.12	1.00	28 00 ------- 28 00	996 1247 1746
1.74	1.65	0.76	b0.39	0.59	8.01	6.50	7.12	6.00	0.89	†2.96	3.00	26 50 38 00 35 00	1578 1731 2213

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*Deficient.
†No. 2035 as muriate 0.26%; as sulphate 0.50%.
†No. 2225 as muriate 0.49%; as sulphate 1.67%.
†No. 1040 as muriate 0.49%; as sulphate 0.59%.
†No. 1067 as muriate 0.13%; as sulphate 0.11%.
†No. 2236 as muriate 0.13%; as sulphate 0.10%.
†No. 1377 as muriate 0.31%; as sulphate 1.29%.
†No. 1578 as muriate 0.39%; as sulphate 2.57%.

TABLE I.—COMPLET

Chemist's number.	Name of Manufacturer and Brand.	Agent and Place of Sampling.	Moisture.
			%
2521	Royster's Safeguard Fertilizer,	Lewis Steingrabe, Mercer,	7.64
997	Royster's Wheat, Oats and Barley Fertilizer,	Brennan & Swan, Nelson,	4.32
1748		N. F. Reed, New Cumberland,	
2269		S. T. Ingham, Nicholson,	
	SCHAAL-SHELDON FERTILIZER CO., BUFFALO, N. Y.		
1698	Guano, 1916,	T. E. Bradley, Spartansburg,	6.91
	THE SCOTT FERTILIZER COMPANY, ELKTON, MD.		
1763	Scott's Potato Grower,	Levi Beiler, Elverson,	10.11
2144		Nathan Bollinger, Little Gap,	
2346		Mackey & Yerkes, Oxford,	
1154	Scott's Potato and Truck,	Ben Mellinger, West Willow,	7.90
1157	Scott's Sure Growth Compound,	Ben Mellinger, West Willow,	9.46
1764		Levi Beiler, Elverson,	
	THE SUPERIOR GUANO CO., BALTIMORE, MD.		
2631	Ammoniated Phosphate and Potash,	Weaver & Berkey, Windber,	6.44
2613	Crop Producer,	Richard Glotfelty, Elk Lick,	5.43
	SWACKS FERTILIZER WORKS, INC., DuBOIS, PA.		
1612	Corn Special, 1917,	Victor Lantz, Mt. Jewett,	2.81
2580		Hibner Hoover Hdwe. Co., DuBois,	
1701	Grain Grower, 1917,	Acme Milling Co., Corry,	3.00
2126		Peter Hause, New Columbia,	
2436		Lloyd Griffith, Osterburg,	
1700	Potato and Truck, 1917,	Acme Milling Co., Corry,	4.58
1739		John K. Watson & D. A. Hankey, Parnassus,	
2125		Peter Hause, New Columbia,	
	SWIFT & COMPANY, INC., BALTIMORE, MD.		
2503	Ammoniated Phosphate and Potash,	W. P. Rouse & Son, North East,	4.55
1818	Buckwheat Special,	Horn & Devling, Galeton,	6.42
2103	Diamond "A" Fertilizer,	S. H. Snavely, Manheim,	3.51
2525	New York State Potato Fertilizer,	R. G. Young Sons, New Galilee,	6.34
1396	Red Star Fertilizer,	D. Brinser, Rheems,	4.11
1815		Horn & Devling, Galeton,	
1618	Reliable Grain Fertilizer,	Herzing & Erich, St. Marys,	3.96
1671		J. R. Weaver, New Oxford,	
2409		C. R. Beers, Easton,	
2035	Standard Potato Fertilizer,	Harry Van Fliet, East Stroudsburg,	4.10
2102		S. H. Snavely, Manheim,	
2250		M. C. Stewart, Indiana,	
1392	Standard Tobacco Fertilizer,	D. Brinser, Rheems,	4.56
2275	Swift's Special Diamond "L",	C. B. Tyler, Meshoppen,	3.52
1160	Truck and Vegetable Fertilizer,	J. B. Miller & Son, New Danville,	5.17
1380		I. W. Bunnell, Pleasant Mount,	
1730		W. J. Kennedy & Son, Mars,	

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a=3/5 or more, b=2/5 to 3/5, c=2/5 or less of active insoluble nitrogen.

FERTILIZERS.—Continued.

NITROGEN.					PHOSPHORIC ACID.					POTASH.		Selling price per ton at place of selection.	Chemist's number.
Total.			Insoluble.		Total.		Available.						
Found.	Guaranteed.	Water soluble.	Active.	Inactive.	Found.	Guaranteed.	Found.	Guaranteed.	Insoluble.	Found.	Guaranteed.		
%	%	%	%	%	%	%	%	%	%	%	%	$	
*1.65	2.06	0.95	a0.43	0.27	9.94	8.50	9.49	8.00	0.45	2.12	2.00	33 00	2521
1.05	0.82	0.33	b0.29	0.43	9.21	8.50	8.44	8.00	0.77	†2.02	2.00	28 00 29 50 32 00	997 1748 2269
0.85	0.82	0.68	--------	------	11.21	11.00	10.57	10.00	0.64	1.06	1.00	27 00	1698
1.67	1.65	1.17	b0.20	0.30	13.00	--------	11.79	10.00	1.21	†1.78	1.00	26 00 -------- 27 50	1766 2144 2346
*2.24	2.50	1.26	b0.51	0.47	11.91	--------	10.51	9.00	1.40	1.28	1.00	31 00	1154
*3.07	3.30	2.19	b0.51	0.37	13.10	--------	11.76	10.00	1.34	1.32	1.00	36 00 33 00	1157 1761
1.35	0.82	1.08	c0.09	0.18	10.45	9.00	8.54	8.00	1.91	*1.76	2.00	28 50	2661
1.13	0.82	0.21	b0.37	0.55	10.94	9.00	8.13	8.00	2.81	*0.76	1.00	22 50	2613
1.05	0.85	0.37	c0.18	0.50	8.94	9.00	8.05	8.00	0.89	†1.38	1.50	28 00 26 00	1642 2580
0.87	0.85	0.26	c0.18	0.43	8.36	8.00	7.40	7.00	0.96	†1.22	1.00	25 00 24 00 21 36	1701 2126 2436
1.85	1.65	1.07	c0.27	0.51	8.95	9.00	*7.55	8.00	1.40	*1.78	2.00	34 00 36 00 32 00	1700 1739 2125
1.87	1.65	0.94	b0.40	0.53	12.42	--------	10.09	10.00	2.33	†0.88	0.50	26 50	2503
0.65	0.82	0.47	--------	------	12.96	--------	12.51	11.00	0.45	†1.18	1.00	28 75	1818
*1.88	2.47	0.72	b0.66	0.50	9.66	--------	8.45	8.00	1.21	0.81	1.00	30 95	2103
3.38	3.29	1.64	b0.93	0.81	9.73	--------	*7.63	8.00	2.10	1.82	2.00	40 00	2525
2.27	1.65	1.36	b0.39	0.52	8.18	--------	*7.35	8.00	0.83	†2.10	2.00	31 00 36 00	1396 1815
0.81	0.82	0.29	b0.21	0.31	8.81	--------	8.04	8.00	0.77	1.28	1.00	25 00 25 00 --------	1618 1671 2409
*1.37	1.65	0.77	c0.23	0.37	9.59	--------	8.82	8.00	0.77	3.18	3.00	-------- 38 65 38 00	2065 2102 2250
1.84	1.65	0.62	b0.61	0.61	9.57	--------	*7.72	8.00	1.85	*2.70	3.00	36 00	1392
0.61	0.41	0.28	b0.17	0.16	9.10	--------	8.46	8.00	0.64	†0.80	0.50	19 50	2275
*1.45	1.65	0.58	b0.36	0.51	8.99	--------	*7.46	8.00	1.53	1.08	1.00	28 00 26 50 30 00	1160 1380 1730

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*Deficient.
†No. 997 as muriate 0.24%; as sulphate 1.78%.
†No. 1766 as muriate 0.33%; as sulphate 1.45%.
†No. 1642 as muriate 0.29%; as sulphate 1.09%.
†No. 1701 as muriate 0.22%; as sulphate 1.00%.
†No. 2503 as muriate 0.46%; as sulphate 0.42%.
†No. 1818 as sulphate 1.18%.
†No. 1396 as muriate 0.35%; as sulphate 1.75%.
†No. 2275 as sulphate 0.80%.

Chemist's number.	Name of Manufacturer and Brand.	Agent and Place of Sampling.	Moisture.
	I. P. THOMAS & SON CO., PHILADELPHIA, PA.		%
2301	Champion Guano,	A. M. Weik, Kleinfeltersville,	6.20
962	Grain Special Fertilizer,	B. R. Summer & Co., Waynesboro,	6.63
2013		C. H. Henrie, Millville,	
2343		Theo. M. Griffith & Son, East Downingtown,	
963	Improved Fertilizer,	B. R. Summer & Co., Waynesboro,	5.56
1036		Ed. Shuey, Annville,	
1107	Normal Fertilizer,	Ira Harpster, Warriors Mark,	4.66
2516		Greenville Coal & Ice Co., Greenville.	
2620	Superior Superphosphate,	A. O. Beal, Sand Patch,	4.93
1222	Tip Top Fertilizer,	E. S. Risser, Palmyra,	6.69
2342		Theo. M. Griffith & Son, East Downingtown,	
1223	Truckers' High Grade Manure,	E. S. Risser, Palmyra,	7.98
	TUSCARORA FERTILIZER CO., BALTIMORE, MD.		
2242	Tuscarora's (1-9-3),	William Gates Estate, Kittanning,	9.72
	THE J. E. TYGERT COMPANY, BY THE AMERICAN AGRICULTURAL CHEMICAL CO., PHILADELPHIA, PA.		
2279	Quaker Special Fertilizer, 1916,	J. M. Wells, Wyalusing,	9.32
2280	Special Potato and Tomato Guano, 1916,	J. M. Wells, Wyalusing,	8.26
1187	Standard Fertilizer, 1916,	Lovine Lerch, Bethlehem,	8.62
	VIRGINIA-CAROLINA CHEMICAL CO. OF DELAWARE, BALTIMORE, MD.		
2118	V. C. Champion Manure,	G. D. Kunkle, Winfield,	4.80
2656		E. B. Maurer, Boswell,	
2589	V. C. Fish Bone and Potash Revised,	N. H. Diener, Brookville,	6.14
2117	V. C. Standard Corn and Grain Grower,	G. D. Kunkle, Winfield,	6.43
2657		E. B. Maurer, Boswell,	
	ROY WALTER, HANOVER, PA.		
2022	Walter's Crop Grower,	Roy Walter, Hanover,	‡5.29
	WARREN FERTILIZER CO., WARREN, PA.		
1830	Warren Special Potato and Truck,	Warren Fertilizer Co., Warren,	7.11
2477		Pickett Hardware Co., Warren,	
	WASHINGTON, ALEXANDER & COOKE COMPANY, CHARLES TOWN, W. VA.		
903	W. A. & C's. Potato Manure,	Albert Herr, Quarryville,	10.13
905	W. A. & C's. Wheat, Corn and Oats Mixture,	Albert Herr, Quarryville,	6.03
1682		E. S. Kelly, Gettysburg,	
	W. E. WHANN CO., SUBSIDIARY OF THE AMERICAN AGRICULTURAL CHEMICAL CO., PHILADELPHIA, PA.		
1197	Whann's Chester Valley Available Ammoniated Superphosphate, 1916,	M. F. Sassman, Ottsville,	7.94
1170	Whann's Chester Valley Fish and Potash Fertilizer, 1916,	J. A. Umble, Bird-in-Hand,	8.07
1126	Whann's Chester Valley Special Potato and Truck Fertilizer,	W. F. Mundis, York,	7.66

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a=3/5 or more, b=2/5 to 3/5, c=2/5 or less of active insoluble nitrogen.

FERTILIZERS.—Continued.

NITROGEN.					PHOSPHORIC ACID.					POTASH.		Selling price per ton at place of selection.	Chemist's number.
Total.		Water soluble.	Insoluble.		Total.		Available.		Insoluble.	Found.	Guaranteed.		
Found.	Guaranteed.		Active.	Inactive.	Found.	Guaranteed.	Found.	Guaranteed.					
%	%	%	%	%	%	%	%	%	%	%	%	$	
1.48	1.65	0.87	b0.25	0.36	10.31	8.50	9.42	8.00	0.89	†1.14	1.00	27 75	2301
1.04	0.82	0.27	c0.22	0.55	10.05	8.50	8.71	8.00	1.34	†2.24	2.00	28 10 28 00 29 00	962 2013 2343
1.00	0.82	0.52	c0.16	0.32	11.74	10.50	10.46	10.00	1.28	†1.22	1.00	24 35 23 25	963 1036
1.05	1.00	0.53	b0.22	0.30	10.34	9.00	9.00	8.50	1.34	1.38	1.00	22 60 26 00	1107 2516
1.06	0.82	0.52	b0.22	0.32	8.89	7.50	7.81	7.00	1.08	1.18	1.00	25 00	2620
2.66	2.45	1.06	b0.64	0.96	9.64	8.50	8.62	8.00	1.02	†1.12	1.00	29 00 31 00	1222 2342
3.28	3.25	2.70	b0.23	0.35	9.34	8.50	8.32	8.00	1.02	1.20	1.00	--------	1223
0.99	0.82	0.27	c0.17	0.55	10.28	9.50	9.20	9.00	1.08	3.00	3.00	36 00	2242
1.06	0.82	0.63	a0.27	0.16	11.57	11.00	10.55	10.00	1.02	1.00	1.00	24 75	2279
*1.69	2.06	1.09	a0.41	0.19	11.75	11.00	10.22	10.00	1.53	1.20	1.00	29 75	2280
1.59	1.65	0.82	a0.53	0.24	11.62	10.00	10.22	9.00	1.40	1.14	1.00	--------	1187
0.49	0.41	0.07	c0.13	0.29	9.69	9.00	8.16	8.00	1.53	1.08	1.00	20 00 23 50	2118 2656
2.00	1.65	0.51	b0.75	0.74	10.68	9.50	8.32	8.50	2.36	1.04	1.00	30 00	2589
1.01	0.41	0.59	b0.17	0.25	10.22	9.00	8.31	8.00	1.91	2.06	2.00	24 00 27 00	2117 2657
‡0.25	0.17	0.04	--------	------	*‡0.13	0.42	------	--------	------	‡†0.20	0.12	--------	2022
2.05	1.65	0.87	b0.56	0.62	11.81	--------	9.07	7.00	2.74	2.30	2.00	30 00 33 00	1830 2477
1.35	0.41	0.73	b0.26	0.36	10.69	8.00	8.71	7.00	1.98	2.40	2.00	23 50	903
1.07	0.41	0.48	b0.24	0.35	10.35	9.00	8.76	8.00	1.59	1.20	1.00	19 25 19 50	905 1682
0.95	0.82	0.64	b0.15	0.16	10.59	11.00	*9.76	10.00	0.83	1.26	1.00	25 00	1197
1.64	1.65	1.09	b0.32	0.23	12.44	11.00	11.42	10.00	1.02	1.28	1.00	27 00	1170
2.57	2.47	1.71	a0.58	0.28	11.41	10.00	*8.67	9.00	2.74	1.22	1.00	29 00	1126

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*Deficient.
†No. 2301 as muriate 0.28%; as sulphate 0.86%.
†No. 962 as muriate 0.35%; as sulphate 1.89%.
†No. 963 as muriate 0.11%; as sulphate 1.11%.
†No. 1222 as muriate 0.21%; as sulphate 0.91%.
†No. 2022 as sulphate 0.20%.
‡Excluded from average.

TABLE I.—COMPLETE

Chemist's number.	Name of Manufacturer and Brand.	Agent and Place of Sampling.	Moisture.
			%
	THE ROBERT A. WOOLDRIDGE COMPANY, BALTIMORE, MD.		
2046	Wooldridge's Chieftain Phosphate, 1916,	Samuel Dull, New Cumberland,	6.33
1319	Wooldridge's Farmers' Favorite Cereal Compound, 1916,	V. A. Stufft, Imler,	6.42
2003		H. V. Smith, Turbotville,	
2295		Howard Welsh, Douglassville,	
1535	Wooldridge's Special Potato and Tobacco Fertiliztr. 1916,	C. C. Catherman, Hartleton,	7.09
2004		H. V. Smith, Turbotville,	
1534	Wooldridge's Triumph Brand Phosphate, 1916,	C. C. Catherman, Hartleton,	8.15
2084		Samuel Dull, New Cumberland,	
	YORK CHEMICAL WORKS, YORK, PA.		
1337	Dempwolf's Harvest Queen,	John S. Hershberger, Everett,	3.56
1403		Harry Summy, Landisville,	
2633		W. F. Gnagey, Berlin,	
1655	Dempwolf's Golden Sheaf,	A. G. Smith, Wellsville,	4.66
1762		Mt. Holly Feed & Grain Co., Mt. Holly Springs,	
2374		Steininger Brothers, Middleburg,	
2132	Dempwolf's Half and Half,	Steininger Brothers, Middleburg,	5.48
927	Dempwolf's Plow Brand,	M. J. Sheffer, Hanover,	5.46
1924		Thomas Haines Co., Malvern,	
		Average=	6.70

a=3/5 or more, b=2/5 to 3/5, c=2/5 or less of active insoluble nitrogen.

FERTILIZERS.—Concluded.

NITROGEN.					PHOSPHORIC ACID.					POTASH.		Selling price per ton at place of selection.	Chemist's number.
Total.		Water soluble.	Insoluble.		Total.		Available.		Insoluble.	Found.	Guaranteed.		
Found.	Guaranteed.		Active.	Inactive.	Found.	Guaranteed.	Found.	Guaranteed.					
%	%	%	%	%	%	%	%	%	%	%	%	$	
1.82	1.65	1.15	b0.33	0.34	11.03	10.00	9.12	9.00	1.91	1.00	1.00	29 00	2046
0.55	0.41	0.12	c0.15	0.28	9.67	9.00	8.65	8.00	1.02	1.08	1.00	------- 21 00 22 00	1319 2003 2295
1.75	1.65	1.05	b0.32	0.38	12.23	11.00	11.02	10.00	1.21	1.58	1.00	27 36 27 50	1535 2004
1.29	1.23	0.49	b0.32	0.48	11.99	11.00	10.40	10.00	1.59	1.34	1.00	25 36 27 00	1534 2048
1.07	0.82	0.37	b0.29	0.41	9.83	8.50	8.49	8.00	1.34	1.34	1.00	27 00 28 00 22 00	1337 1403 2633
0.49	0.29	0.03	c0.11	0.35	9.81	8.50	8.47	8.00	1.34	†0.98	0.50	------- 18 00 18 00	1655 1762 2374
0.92	0.82	0.37	b0.22	0.33	8.30	7.50	7.28	7.00	1.02	†1.24	1.00	23 00	2132
1.61	1.65	1.00	b0.26	0.35	9.46	8.50	8.44	8.00	1.02	1.00	1.00	26 50 27 00	927 1924
1.67	------	------	--------	------	10.48	--------	9.07	--------	1.41	1.38	------	28 33	------

†No. 1655 as sulphate 0.98%.
†No. 2132 as muriate 0.26%; as sulphate 0.98%.

TABLE NO. II.—NITROGEN AND

Including Dissolved Bones

Chemist's number.	Name of Manufacturer and Brand.	Agent and Place of Sampling.
	THE AMERICAN AGRICULTURAL CO., NEW YORK, N. Y.	
1134	American Special,	Jacob Beshore, Etters,
1415	Ammoniated Fertilizer A.,	H. P. Passmore and Brother, Oxford,
1630		Zinn Brothers, York,
1821		Henry J. Theis, Germania,
1474	Ammoniated Fertilizer A.A.,	J. H. Campbell, Burlington,
1525		S. C. Yearick, Rebersburgh,
1983		Warren Moser, New Tripoli,
1417	Ammoniated Fertilizer A.A.A.,	H. P. Passmore and Brother, Oxford,
1982		Warren Moser, New Tripoli,
1133	Ammoniated Fertilizer A.A.A.A.,	Jacob Beshore, Etters,
1956		John McCandlass, Norristown,
2505		Keystone Grape Co., North East,
2531	Ammoniated Superphosphate,	H. L. Orr, Tyrone,
1270	1-8-0 Ammoniated Superphosphate,	Nickels & Stewart, Shippensburg,
1502		Gutshall & Lupfer, Blain,
1593	Bradley's Economy Fertilizer,	G. R. Andrews, Enon Valley,
1735		J. A. McKelvey, Blairsville,
2590		J. H. Young, Strattonville,
1073	Bradley's Golden Crop Compound,	Richard Graves, Jermyn,
1592		G. R. Andrews, Enon Valley,
1016	Bradley's Special Superior Compound Revised,	Wysox Produce Co., Wysox,
1736		J. A. McKelvey, Blairsville,
2492		Putnam & Parker, Columbus,
1799	Bradley's Truckers Delight,	G. H. Smith, Franklin Forks,
1603	Crocker's Farmers' Choice,	T. R. Bolton, Cochranton,
2254		L. S. Clark, Indiana,
2602		A. M. Frederick, Jr., Fairchance,
1605	Crocker's Special Colonial Fertilizer Revised,	T. R. Bolton, Cochranton,
1020	Crocker's Special Grain Grower,	Farmers Co-Operation Co., Wysox,
1604		T. R. Bolton, Cochranton,
2482		T. J. Bowman Estate, East Hickory,
1957	Detrick's Ammoniated Superphosphate,	John McCandlass, Norristown,
795	East India Special Improved Compound,	Roy J. Dunham, Wellsboro,
2084		Theo. Gearhart, Gilbert,
2215	W. S. Farmer & Co.'s All Crop Mixture No. 2,	H. M. Shenberger, Dallastown,
1136	W. S. Farmer & Co.'s All Crop Mixture No. 3,	Jacob Conley, Etters,
2331	High Grade Dissolved Bone,	John H. Hicks, Avondale,
2171	Homestead Good Grower,	McKeansburg Grange, New Ringgold,
1713	Milsom's Golden Eagle,	Lake Shore Fruit Co., North East,
1900		Yeager & Kennedy, Waynesburg,
1715	Milsom's Potato Producer,	Lake Shore Fruit Co., North East,
2135		Aaron Zimmerman, Lehighton,
1714	Milsom's Special Harrow Brand,	Lake Shore Fruit Co., North East,
1595	Milsom's Special Phosphate,	Graham Brothers, Darlington,
2599		J. H. Edinger, Luthersburg,
1659	Peerless Wheat and Grass Special,	Zinn Brothers, York,
933	Soluble Grain Mixture,	E. M. Robenstine, Hanover,
2407		John F. Stonebach, Springtown,
2142	Standard Grain and Grass Grower,	Wallace Shellhamer, New Ringgold,
2208		W. E. Norris, New Park,
2083	Sterling Truck and Top Dressing Mixture Revised,	Theo. Gearhart, Gilbert,
1588	Susquehanna Arrow Brand,	M. G. Adams, Paxinos,
1652		J. J. Jacobs, York Springs,
2020	Susquehanna Winner Phosphate,	Z. J. Peters, Gurnsey,

a=3/5 or more, b=2/5 to 3/5, c=2/5 or less of active insoluble nitrogen.

PHOSPHORIC ACID FERTILIZERS.

and Other Like Products.

Moisture.	NITROGEN.					PHOSPHORIC ACID.						Selling price per ton at place of selection.	Chemist's number.
	Total.		Water soluble.	Insoluble.		Total.		Available.		Insoluble.			
	Found.	Guaranteed.		Active.	Inactive.	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.		
%	%	%	%	%	%	%	%	%	%	%	%	$	
7.89	4.27	4.11	3.01	a0.78	0.48	11.07	11.00	10.30	10.00	0.77	1.00	32 50	1134
7.27	0.88	0.82	0.27	b0.25	0.36	11.67	11.00	10.20	10.00	1.47	1.00	21 00 18 50 21 00	1415 1660 1821
4.15	1.83	1.65	1.19	b0.31	0.33	11.95	11.00	10.87	10.00	1.08	1.00	24 00 19 75 21 00	1474 1525 1983
6.16	2.38	2.47	1.52	b0.45	0.41	11.68	11.00	10.40	10.00	1.28	1.00	27 00 26 00	1417 1982
5.00	*3.05	3.29	1.98	b0.60	0.47	11.67	11.00	10.08	10.00	1.59	1.00	30 00 32 00 30 50	1133 1956 2505
4.21	*1.20	1.65	0.56	b0.27	0.37	10.17	13.00	*9.12	12.00	1.05	1.00	24 00	2531
4.56	0.99	0.82	0.24	c0.26	0.49	9.93	9.00	9.23	8.00	0.70	1.00	18 00 18 50	1270 1502
5.18	0.85	0.82	0.22	b0.25	0.38	11.58	11.00	9.92	10.00	1.66	1.00	22 00 22 00 22 00	1593 1735 2590
5.28	2.58	2.47	1.79	b0.42	0.37	12.18	11.00	10.08	10.00	2.10	1.00	26 00 30 00	1073 1592
5.44	1.78	1.65	1.05	b0.33	0.40	12.65	11.00	10.16	10.00	2.49	1.00	23 00 24 00 25 00	1016 1736 2492
9.06	3.18	3.29	2.13	a0.65	0.40	12.69	11.00	10.56	10.00	2.13	1.00	27 00	1799
.43	0.84	0.82	0.34	b0.23	0.27	12.00	11.00	9.96	10.00	2.04	1.00	22 00 19 25 22 00	1603 2254 2602
4.74	2.52	2.47	1.72	a0.50	0.30	12.23	11.00	10:83	10.00	1.40	1.00	29 00	1605
3.81	1.65	1.65	0.93	b0.40	0.32	12.25	11.00	*9.64	10.00	2.61	1.00	21 10 25 00 26 00	1020 1604 2482
9.64	2.13	1.65	1.57	a0.35	0.21	13.02	13.00	12.20	12.00	0.82	1.00	25 00	1957
8.60	1.63	1.65	0.95	b0.34	0.34	12.67	11.00	10.02	10.00	2.65	1.00	26 00 21 00	975 2084
8.72	1.76	1.65	1.02	b0.30	0.44	11.72	11.00	10.25	10.00	1.47	1.00	22 00	2215
7.02	2.45	2.47	1.65	a0.49	0.31	11.99	11.00	10.33	10.00	1.66	1.00	--------	1136
7.12	2.11	2.06	1.31	b0.42	0.38	15.61	13.00	*11.53	12.00	4.08	1.00	22 00	2331
5.10	2.32	2.06	1.43	b0.51	0.38	9.11	9.00	8.47	8.00	0.64	1.00	22 00	2171
5.27	1.75	1.65	0.84	b0.51	0.40	12.56	11.00	10.26	10.00	2.30	1.00	23 50 28 00	1713 1900
4.87	*2.92	3.29	1.95	a0.61	0.36	11.74	11.00	10.15	10.00	1.59	1.00	31 00 28 00	1715 2135
2.47	2.47	2.47	1.67	a0.51	0.29	11.52	11.00	*9.22	10.00	2.30	1.00	27 25	1714
5.55	0.96	0.82	0.36	b0.24	0.36	11.58	11.00	10.24	10.00	1.34	1.00	21 00 22 00	1595 2599
3.51	1.68	1.65	0.67	b0.52	0.49	10.96	9.00	9.17	8.00	1.79	1.00	--------	1659
6.18	0.89	0.82	0.49	b0.19	0.21	9.54	9.00	8.26	8.00	1.28	1.00	16 00 19 00	933 2407
8.90	1.71	1.65	1.05	b0.36	0.30	13.65	13.00	12.31	12.00	1.34	1.00	------- 23 00	2142 2208
6.97	6.07	5.76	5.09	a0.60	0.38	7.91	7.00	6.89	6.00	1.02	1.00	45 00	2083
5.50	0.97	0.82	0.28	c0.24	0.45	9.55	9.00	8.40	8.00	1.15	1.00	19 00 ------	1588 1652
5.67	1.67	1.65	0.80	b0.39	0.48	10.05	9:00	8.58	8.00	1.47	1.00	23 00	2020

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*Deficient.

TABLE II.—NITROGEN AND PHOS

Chemist's number.	Name of Manufacturer and Brand.	Agent and Place of Sampling.
	AMERICAN FERTILIZING COMPANY, BALTIMORE, MD.	
1964	American Eagle Superphosphate,	S. K. Chambers & Brother, Elkview,
2378	American Grain Reliable Ammoniated Formula,	J. B. Rohrer, Port Treverton,
906	American Fish and Bone Special,	Alhert Herr, Quarryville,
2265		G. W. Hoppie, Glenwood,
2617		H. G. Tressler, Sand Patch,
	ARMOUR FERTILIZER WORKS, INC., BALTIMORE, MD.	
966	Armour's (1-8-0),	Nickels & Stewart, Shippenshurg,
1548		Nazareth Coal and Lumber Co., Nazareth,
968	Armour's (1-10-0),	Nickels & Stewart, Shippensburg,
1508		S. E. Shenk & Son, Newville,
1507	Armour's (1.50-9-0),	S. E. Shenk & Son, Newville,
1567		S. G. Updegraff, Williamsport,
1423	Armour's (2-10-0),	Passmore & Co., Nottingham,
1568		S. G. Updegraff, Williamsport,
2514		Simon Eisman, Meadville,
1940	Armour's (2-11-0),	Reese H. White, Honeyhrook,
1464	Armour's (3-10-0),	W. S. Buckman, Hatboro,
	ATLANTIC FERTILIZER WORKS, SWIFT & CO., INC., OWNERS, BALTIMORE, MD.	
1572	Atlantic's Phosphate Mixture,	Clyde Shipman, Hughesville,
	BALTIMORE FERTILIZER CO., BALTIMORE, MD.	
1685	Honest Corn Grower,	J. N. Lightner, Gettysburg,
2290		E. E. Meyers, Fredericksburg,
	BAUGH & SONS COMPANY, PHILADELPHIA, PA.	
1513	Baugh's Ammoniated Super-Phosphate,	John H. Shaeffer, Greason,
930	Baugh's Corn and Oats Fertilizer,	M. J. Sheffer, Hanover,
2369		J. A. Kimhel, Elyshurg,
2587		Punxsutawney Lumber Supply Co., Punxsutawney,
1749	Baugh's Half and Half Mixture,	N. F. Reed New Cumherland,
1006	Baugh's High Grade Ammoniated Animal Base.	R. W. Beardsley, Warrenham,
1069		W. W. Haas, Pitman,
1169		J. Umble, Bird-in-Hand,
1306	Baugh's New Process 10% Guano,	C. I. Saylor, Felton,
1118	Baugh's The Old Stand-by Dissolved Animal Base,	R. D. Forman, Centre Hall,
1434		H. M. Long, Oxford,
1676		E. M. Wecly, New Oxford,
1330	Baugh's Peninsula Grain Producer,	Francis Baker, Everett,
1703		E. L. Smith & Co., Union City,
2322		Long S. Taylor, Drumore,
1341	Baugh's Pure Dissolved Animal Bones,	A. C. Richards & Son, New Paris,
2567		Edwards Hardware Co., Ehenshurg,
1084	Baugh's Truckers Favorite,	Ahington Lumber Co., Dalton,
1122		Brillinger & Swartz, Emigsville,
1327		Francis Baker, Everett,
	BERGER BROTHERS, EASTON, PA.	
1989	Lehigh Superphosphate 1916,	Stewart Weaver, Easton,
	D. BLOCHER & CO., GETTYSBURG, PA.	
1679	High Grade Phosphate,	F. D. Blocher, Gettyshurg,

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a=3/5 or more, b=2/5 to 3/5, c=2/5 or less of active insoluble nitrogen.

PHORIC ACID FERTILIZERS.—Continued.

	NITROGEN.					PHOSPHORIC ACID.							
	Total.			Insoluble.		Total.		Available.		Insoluble.			
Moisture.	Found.	Guaranteed.	Water soluble.	Active.	Inactive.	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.	Selling price per ton at place of selection.	Chemist's number.
%	%	%	%	%	%	%	%	%	%	%	%	$	
5.26	1.11	0.41	0.60	b0.29	0.22	10.47	9.00	9.70	8.00	0.77	1.00	19 00	1964
4.93	0.83	0.41	0.34	b0.20	0.29	10.19	11.00	*8.98	10.00	1.21	1.00	17 25	2378
8.00	1.91	1.65	1.33	b0.31	0.27	13.34	12.00	*10.73	11.00	2.61	1.00	21 25 26 00 23 00	906 2265 2617
5.66	0.99	0.82	0.24	b0.30	0.45	9.13	8.50	8.24	8.00	0.89	0.50	18 00 17 00	966 1548
5.34	1.02	0.82	0.45	b0.23	0.34	11.80	10.50	10.97	10.00	0.83	0.50	19 00 18 00	968 1508
3.74	1.28	1.23	0.55	b0.30	0.43	10.46	9.50	9.06	9.00	1.40	0.50	20 00 22 00	1507 1567
7.20	1.57	1.65	0.37	b0.50	0.70	11.75	10.50	10.60	10.00	1.15	0.50	24 00 24 00 21 25	1423 1568 2514
9.51	1.77	1.65	0.61	b0.47	0.69	13.13	11.50	10.83	11.00	2.30	0.50	23 00	1940
11.02	*2.15	2.47	1.20	b0.46	0.49	11.98	10.50	10.77	10.00	1.21	0.50	28 00	1464
5.16	0.89	0.82	0.29	a0.36	0.21	*19.43	20.00	--------	--------	------	------	28 00	1572
4.38	1.08	0.80	0.49	c0.22	0.37	11.33	11.00	10.44	10.00	0.89	1.00	20 00 -------	1685 2290
8.60	1.37	1.02	0.79	b0.33	0.25	13.66	------	12.07	10.00	1.59	------	19 00	1513
9.22	1.62	1.65	0.86	b0.32	0.44	13.11	------	10.75	10.00	2.36	------	23 00 24 00 25 00	930 2369 2587
4.72	1.42	1.23	0.54	b0.50	0.38	20.17	19.00	--------	--------	------	------	29 00	1749
6.87	3.33	3.30	1.92	c0.43	0.98	13.43	------	10.73	10.00	2.70	------	30 00 27 75 29 00	1006 1069 1169
6.75	*7.76	8.23	5.91	b0.99	0.86	7.88	------	6.80	5.00	1.08	------	47 00	1306
8.00	1.66	1.65	0.78	b0.37	0.51	14.86	------	12.25	12.00	2.61	------	24 45 25 00 23 00	1118 1434 1676
6.07	0.95	0.82	0.34	c0.22	0.39	11.25	------	9.15	9.00	2.10	------	19 00 21 50 18 00	1330 1703 2322
4.94	2.29	2.06	1.02	a0.95	0.32	16.67	------	15.27	13.00	1.40	------	------- 32 00	1341 2567
10.60	2.57	2.47	1.85	b0.34	0.38	12.58	------	11.11	10.00	1.47	------	28 00 19 00 28 00	1084 1122 1327
6.98	1.88	1.65	1.20	b0.41	0.27	12.37	11.00	10.14	10.00	2.23	1.00	30 00	1989
7.43	1.66	1.65	0.93	b0.36	0.37	13.01	11.00	10.01	10.00	3.00	1.00	22 00	1679

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*Deficient.

Chemist's number.	Name of Manufacturer and Brand.	Agent and Place of Sampling.
	BOWKER FERTILIZER COMPANY, SUBSIDIARY OF THE AMERICAN AGRICULTURAL CHEMICAL CO., NEW YORK, N. Y.	
1132	Bowker's Ammoniated O. I. O. Phosphate,	G. W. Bamberger, Etters,
1505		John K. Beidler, Oakville,
2272	Bowker's High Nitrogen Mixture without Potash,	A. E. Seamans, Factoryville,
1625	Bowker's Superphosphate with Ammonia, 1%,	C. Greg, Ridgway,
2312		S. A. Fishburn, Paxtonia,
2475		Holmes & Gilfillan, Smethport,
914	Bowker's Superphosphate with Ammonia, 2%,	J. G. Hall, New Providence,
1002		L. I. Finch, Windham,
1591		G. L. Rommel, Enon Valley,
1131	Bowker's Superphosphate with Ammonia, 3%,	G. W. Bamberger, Etters,
1937		J. K. Lewis, Honeybrook,
1366	Bowker's Superphosphate with Ammonia, 4%,	Fred Edwards, Ariel,
2158		Michael Harten, Nescopeck,
2262		John G. Glover, Thompson,
	CAMBRIA FERTILIZER CO., JOHNSTOWN, PA.	
2563	Standard Phosphate,	Coples & Moore, Johnstown,
2660		Claude Davis, Windber,
	THE CENTRAL CHEMICAL CO. (THOMAS FERTILIZER WORKS), HAGERSTOWN, IND.	
971	C C C Acme Brand,	Nickels & Stewart, Shippensburg,
969	C C C Ammoniated Phosphate,	Nickels & Stewart, Shippensburg,
1587		C. C. Reed, Paxinos,
1299	C C C Dissolved Bone,	Charles L. Wilson, Stewartstown,
1328		Francis Baker, Everett,
2659		E. S. Thomas, Holsopple,
1298	C C C Fish Bone Compound,	D. A. Hess, Stewartstown,
2127		Adam Krug, Allenwood,
2614		Irwin Shockley, Sand Patch,
970	C C C Special Bone Mixture,	Nickels & Stewart, Shippensburg,
2645		H. E. Barclay, Somerset,
2658		E. S. Thomas, Holsopple,
1687	C C C Superior,	Biglerville Warehouse Co., Biglerville,
2418		Edgar Hepler, Hepler,
1586	C C C Truck Special,	C. C. Reed, Paxinos,
1742		C. L. Bernheisel & Co., New Kingston,
1862		Lloyd A. Hay, Meyersdale,
	THE CHESAPEAKE CHEMICAL COMPANY, BALTIMORE, MD.	
1789	C. C. Co.'s Brand ½-6-0, Grain Grower,	Pat Quinn, Dushore,
2011	C. C. Co.'s Buyers' Favorite,	Rishel & Kramer, Jerseytown,
2550		L. R. Over, Curryville,
2234	C. C. Co.'s Favorite Producer,	Simon Carl, Numidia,
2222	C. C. Co.'s Fish and Tankage Phosphate,	J. B. M. Gordon, Mechanicsburg,
1494	C. C. Co.'s Gem Phosphate, 1-8-0,	Pat Quinn, Dushore,
2010	C. C. Co.'s Grangers Phosphate,	Rishel & Kramer, Jerseytown,
	THE COE-MORTIMER COMPANY (SUBSIDIARY OF THE AMERICAN AGRICULTURAL CHEMICAL CO.), NEW YORK, N. Y.	
1560	E. Frank Coe's XXV Ammoniated Phosphate 1916,	Danial Widley, Alburtes,
1904		J. G. Cover, Masontown,
2487		C. C. Decker, Farmers Valley,
1060	E. Frank Coe's Morcoe Top Dresser without Potash,	Charles Schoffstall, Valley View,
1080		The Abington Lubmer Co., Dalton,
1772		John H. Roth, Berks,

a=3/5 or more, b=2/5 to 3/5, c=2/5 or less of active insoluble nitrogen.

PHORIC ACID FERTILIZERS.—Continued.

	NITROGEN.					PHOSPHORIC ACID.						Selling price per ton at place of selection.	Chemist's number.
	Total.			Total.		Insoluble.		Available.		Insoluble.			
Moisture.	Found.	Guaranteed.	Water soluble.	Active.	Inactive.	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.		
%	%	%	%	%	%	%	%	%	%	%	%	$	
7.10	0.91	0.62	0.29	b0.28	0.34	11.25	11.00	10.55	10.00	0.70	1.00	17 00 18 00	1132 1505
8.42	8.62	8.23	7.77	a0.55	0.30	5.96	6.00	5.51	5.00	0.45	1.00	50 00	2272
4.43	1.12	0.82	0.49	b0.34	0.29	11.66	11.00	10.00	10.00	1.66	1.00	22 00 18 50 21 75	1625 2312 2475
7.16	1.68	1.65	1.04	b0.32	0.32	11.88	11.00	10.03	10.00	1.85	1.00	22 00 21 50 25 00	914 1002 1591
6.45	2.56	2.47	1.60	b0.48	0.48	11.62	11.00	10.09	10.00	1.53	1.00	26 00 28 00	1131 1937
8.55	3.17	3.29	2.27	b0.50	0.40	12.19	11.00	10.91	10.00	1.28	1.00	35 00 28 00 32 00	1366 2158 2262
2.48	1.66	1.50	0.33	b0.75	0.58	11.21	9.00	9.04	7.00	2.17	2.00	25 00 25 80	2563 2660
2.76	0.85	0.82	0.52	b0.13	0.20	9.98	------	8.99	8.00	0.99	------	18 00	971
4.35	0.60	0.41	0.17	c0.15	0.28	9.13	------	8.30	8.00	0.83	------	16 50 17 00	969 1587
6.42	2.20	2.05	1.00	b0.48	0.72	15.93	------	*12.23	13.00	3.70	------	25 00 28 00 25 80	1299 1328 2659
3.55	1.28	1.25	0.45	b0.47	0.36	11.65	------	10.31	10.00	1.34	------	19 00 22 00 22 40 24 00	1298 2127 2614 970
6.60	1.68	1.65	1.16	b0.24	0.28	11.03	------	10.01	10.00	1.02	------	------- 21 40	2645 2658
3.67	0.84	0.82	0.30	c0.16	0.38	13.56	------	12.03	12.00	1.53	------	20 00 -------	1687 2418
5.29	2.78	2.50	1.96	b0.34	0.48	11.23	------	10.15	10.00	1.08	------	27 50 25 00 24 75	1586 1742 1862
2.81	0.83	0.41	0.40	b0.17	0.26	8.42	8.50	*6.89	8.00	1.53	0.50	16 50	1789
5.28	1.32	0.82	0.47	c0.29	0.56	12.81	11.00	10.96	10.00	1.85	1.00	19 00 19 00	2011 2550
8.58	2.48	2.46	1.72	b0.32	0.44	10.91	11.00	*8.81	10.00	2.10	1.00	26 00	2234
3.15	1.25	1.23	0.46	b0.32	0.47	9.64	8.75	*6.86	8.00	2.78	0.75	--------	2222
4.66	0.97	0.82	0.27	c0.25	0.45	10.27	9.00	8.04	8.00	2.23	1.00	17 00	1494
6.42	1.85	1.64	0.73	b0.47	0.65	12.55	11.00	*9.42	10.00	3.13	1.00	21 00	2010
6.17	1.09	0.82	0.48	b0.24	0.37	11.38	11.00	10.49	10.00	0.89	1.00	16 00 22 00 28 00	1560 1904 2487
9.24	8.16	8.23	7.14	a0.62	0.40	6.70	6.00	6.06	5.00	0.64	1.00	48 50 54 00 -------	1060 1080 1772

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*Deficient.

TABLE II.—NITROGEN AND PHOS

Chemist's number.	Name of Manufacturer and Brand.	Agent and Place of Sampling.
1075	E. Frank Coe's Original Ammoniated Dissolved Phosphate 1916,	G. B. Swartz, Moscow,
2353		U. B. Stambaugh, Thomasville,
2663		E. M. Hays, Windber,
1174	E. Frank Coe's Prolific Crop Producer 1916,	Robert Pittenger, Easton,
2325		H. C. Showalter, New Holland,
2544		W. S. Suckling, Hollidaysburg,
	COLUMBIA GUANO COMPANY, BALTIMORE, MD.	
1590	Columbia Corn and Oats Fertilizer,	M. P. Whitenight, Bloomsburg,
990	Columbia Deluxe Ammoniated Superphosphate,	M. U. Benson, Mansfield,
991	Columbia Duplex Ammoniated Phosphate,	M. U. Benson, Mansfield,
1307		J. A. Myers, Felton,
1608		P. F. Schaal, Cochranton,
1308	Columbia Reflex Ammoniated Superphosphate,	J. A. Myers, Felton,
1570		Clyde Shipman, Hughesville,
1607		P. F. Schaal, Cochranton,
	THE CONSUMER'S CHEMICAL CORPORATION, NEW YORK, N. Y.	
1095	Consumer's Pure-Sure Ammoniated Bone Phosphate,	Murray & Co., Honesdale,
1542		Snyder & Miller, Mifflinburg,
1382	Consumer's Pure-Sure Corn and Grain Bone Phosphate,	B. F. Kennedy, Pleasant Mount,
1541		Snyder & Miller, Mifflinburg,
1091	Consumer's Pure-Sure Potato and Vegetable (without Potash),	Murray & Co., Honesdale,
	HENRY COPE & CO., LINCOLN UNIVERSITY, PA.	
2350	Ammoniated Phosphate,	Lyburn Whitaker, Oxford,
2351	Maryland Special,	Lyburn Whitaker, Oxford,
2348	Potato and Corn Phosphate,	Lyburn Whitaker, Oxford,
2349	Top Dresser Phosphate,	Lyburn Whitaker, Oxford,
	JOSIAH COPE & COMPANY, SUBSIDIARY OF THE AMERICAN AGRICULTURAL CHEMICAL CO., BALTIMORE, MD.	
1497	Ammoniated Fertilizer A,	B. F. Lightner, Landisburg,
1431	Ammoniated Fertilizer AA,	H. M. Long, Oxford,
2129		J. P. Klingler, Middleburgh,
1026	Ammoniated Fertilizer AAA,	P. I. Moyer, Campbelltown,
1231		Cyrus W. Gaul, Robesonia,
943	Fish Guano,	J. H. Kelly, Littlestown,
1162		James Elveston, Christiana,
1430		H. M. Long, Oxford,
	JAMES G. DOWNWARD & CO., COATESVILLE, PA.	
1449	All Crop Phosphate,	Edw. Tingley, New London,
2300		A. G. Lehman, Palmyra,
1450	Ammoniated Phosphate,	Edward Tingley, New London,
1448	Potato, Corn and Grain Phosphate,	Edward Tingley, New London,
2108	Potato, Corn and Grain Phosphate,	John Stolfuss, Gap,
	EASTERN GUANO CO., NEW YORK, N. Y.	
955	Eastern Fish Bone Mixture,	Marion Warehouse Co., Marion,
1723		Thompson & Glenn, Butler,
2384	Eastern Royal Truck,	J. S. Musser, Oakland Mills,
	AMOS EBY & CO., LEAMAN PLACE, PA.	
2106	Pequea High Grade,	S. Clayton Rauch, Leaman Place,
	ERIE REDUCTION CO., ERIE, PA.	
1706	Acidulated Fish Special,	W. D. Ripley, Wesleyville,

a=3/5 or more, b=2/5 to 3/5, c=2/5 or less of active insoluble nitrogen.

PHORIC ACID FERTILIZERS.—Continued.

	NITROGEN.					PHOSPHORIC ACID.							
	Total.			Insoluble.		Total.		Available.		Insoluble.			
Moisture.	Found.	Guaranteed.	Water soluble.	Active.	Inactive.	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.	Selling price per ton at place of selection.	Chemist's number.
%	%	%	%	%	%	%	%	%	%	%	%	$	
6.64	1.85	1.65	1.14	b0.36	0.35	12.28	11.00	10.11	10.00	2.17	1.00	23 95 29 95 22 50	1075 2353 2663
8.42	3.25	3.29	2.30	b0.49	0.46	12.54	11.00	10.63	10.00	1.91	1.00	29 50 30 00 32 00	1174 2325 2544
6.43	1.02	0.82	0.44	b0.30	0.28	9.72	8.50	8.76	8.00	0.96	0.50	18 35	1590
5.25	2.14	2.06	1.38	a0.49	0.27	13.84	12.50	12.72	12.00	1.12	0.50	22 25	990
3.83	1.85	1.65	1.13	b0.33	0.39	11.43	10.50	10.15	10.00	1.28	0.50	19 50 21 00 24 25	991 1307 1608
4.09	1.04	0.82	0.44	b0.28	0.32	11.42	10.50	10.27	10.00	1.15	0.50	------- 19 00 20 50	1308 1570 1607
5.40	1.75	1.65	1.27	a0.30	0.18	11.97	11.00	10.38	10.00	1.59	1.00	25 65 -------	1095 1542
8.68	1.98	1.65	1.41	a0.34	0.23	13.59	13.00	12.12	12.00	1.47	1.00	24 00 -------	1382 1541
7.17	3.30	3.29	2.36	a0.69	0.25	13.93	11.00	10.87	10.00	3.06	1.00	28 50	1091
10.95	1.93	2.06	1.32	b0.29	0.32	13.23	------	12.40	10.00	0.83	------	24 00	2350
10.06	2.07	2.06	1.82	a0.21	0.04	15.18	------	14.48	13.50	0.70	------	27 00	2351
11.10	*2.25	2.47	2.00	b0.15	0.10	15.10	------	14.59	10.50	0.51	------	26 00	2348
9.46	1.23	1.23	0.82	b0.19	0.22	12.17	------	11.40	9.50	0.77	------	21 00	2349
9.01	0.86	0.82	0.38	b0.20	0.28	11.54	11.00	10.65	10.00	0.89	1.00	19 00	1497
6.09	1.79	1.65	0.90	b0.36	0.53	12.02	11.00	10.74	10.00	1.28	1.00	24 00 22 00	1431 2129
6.80	2.40	2.47	1.56	b0.41	0.43	11.42	11.00	9.95	10.00	1.47	1.00	------- -------	1026 1231
5.00	1.79	1.65	1.00	b0.39	0.40	9.76	9.00	8.36	8.00	1.40	1.00	19 50 21 00 22 00	943 1162 1430
4.06	0.84	0.41	0.14	c0.24	0.48	9.99	9.00	8.40	8.00	1.59	1.00	22 00 20 50	1449 2300
5.14	0.91	0.82	0.16	b0.30	0.45	10.91	11.00	*9.10	10.00	1.81	1.00	25 00	1450
3.51	1.62	1.65	0.14	c0.57	0.91	7.78	11.00	*7.27	10.00	0.51	------	31 00	1448
4.27	*1.18	1.65	0.41	b0.31	0.46	10.12	11.00	*9.35	10.00	*0.77	1.00	-------	2108
4.78	1.27	1.25	0.55	b0.30	0.42	11.28	------	10.13	10.00	1.15	------	21 00 25 00	955 1723
2.51	2.55	2.50	1.85	b0.30	0.40	11.08	------	*9.74	10.00	1.34	------	24 00	2384
11.43	3.32	3.29	1.87	b0.60	0.85	10.06	11.00	*7.83	9.00	2.23	2.00	29 50	2106
3.53	1.44	1.23	0.52	b0.42	0.50	12.91	11.00	9.30	9.00	3.61	2.00	19 80	1706

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*Deficient.

TABLE II.—NITROGEN AND PHOS

Chemist's number.	Name of Manufacturer and Brand.	Agent and Place of Sampling.
	EUREKA CHEMICAL COMPANY, BALTIMORE, MD.	
1033	Eureka C. I. S. Special,	W. E. Urich, Myerstown,
1125		E. H. Fink, York,
1905	Eureka Crop Grower,	C. C. Davis, Greensboro,
2212	Eureka Farmers' Favorite,	J. H. Bartenslager, Stewartstown,
	EUREKA FERTILIZER CO., LANCASTER, PA.	
2289	Corn and Potato,	Jacob J. Schwankweiler, Topton,
1023	No. 2 Farmers Favorite,	P. S. Hershey, Lancaster,
	FARMERS FERTILIZER AND FEED CO., WESTMINSTER, MD.	
1665	XX Phosphate,	J. Diller, Hanover,
	FARMERS FERTILIZER WORKS, ELIZABETHTOWN, PA.	
2054	Farmers Golden Sheaf,	John Sheets, Elizabethville,
1045	Potato, Tobacco and Truck Manure,	C. C. Gingrich, Lawn,
1401		H. Baer & Son, Salunga,
2130		Steininger Brothers, Middlsburgh,
	GODFREY CO-OPERATIVE FERTILIZER & CHEMICAL CO., NEWARK, N. J.	
983	Godfrey's Corn Mixture,	Equity Co-Operative Exchange, Wellsboro,
1212		G. B. M. Fry, Muncy,
2281		P. J. Barrett, Towanda,
982	Godfrey's Early Potato Mixture,	Equity Co-Operative Exchange, Wellsboro,
1216	Godfrey's Early Potato Mixture,	G. B. M. Fry, Muncy,
2282	Godfrey's Early Potato Mixture,	P. J. Barrett, Towanda,
1214	Godfrey's Pennsylvania Special,	G. B. M. Fry, Muncy,
1213	Godfrey's Special Mixture,	G. B. M. Fry, Muncy,
	GRIFFITH & BOYD COMPANY, BALTIMORE, MD.	
900	Blood and Bone Mixture,	William Chamberlain, Christiania,
2045		C. F. Gelbach, Duncannon,
1129	Cereal Mixture,	George A. Wolf & Sons, Mt. Wolf,
1207		Artley Brothers, Muncy,
1907		F. S. Sadler, Point Marion,
2042	Farmers Bone Mixture,	C. F. Gelbach, Duncannon,
1205	Farmers Gem,	Artley Brothers, Muncy,
1886		Peacock Brothers, Houston,
2203		H. W. Rehanyer, Turn Pike,
1428	Fish and Bone Mixture,	Passmore & Co., Nottingham,
1845		J. F. Hogsett & Son, Uniontown,
1712	Peerless Mixture,	Stow Lumber & Coal Co., Harbor Creek,
2664		L. A. Meyers, Hooversville,
1148	Pure Dissolved Animal Bone,	Willis Herr, Strasburg,
1206		Artley Brothers, Muncy,
1127	Truckers Manure Substitute,	George A. Wolf & Sons, Mt. Wolf,
1147		Willis Herr, Strasburg,
1426		Passmor & Co., Nottingham,
	S. M. HESS & BROTHER, INC., PHILADELPHIA, PA.	
1918	Ammoniated Grain Grower,	Thomas J. Webb, Coatesville,
2411		Edwin Frace, Easton,
1099	Potato Crop Grower,	Oscar Stover, Boalsburgh,
2412		Edwin Frace, Easton,
2320	Reliable Super Phosphate,	Charley Fritz, Quarryville,
1504	Standard Super Phosphate,	J. D. Cooper, Landisburg,
1208	Superior Super Phosphate,	J. M. Hill, Muncy,
1363		Stoup & Baker, Valencia,
2462		Porter Brothers, Petersburg,

a=3/5 or more, b=2/5 to 3/5, c=2/5 or less of active insoluble nitrogen.

PHORIC ACID FERTILIZERS.—Continued.

	NITROGEN.					PHOSPHORIC ACID.							
	Total.			Insoluble.		Total.		Available.		Insoluble.			
Moisture.	Found.	Guaranteed.	Water soluble.	Active.	Inactive.	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.	Selling price per ton at place of selection.	Chemist's number.
%	%	%	%	%	%	%	%	%	%	%	%	$	
2.71	2.64	2.47	1.98	b0.37	0.29	8.55	8.50	8.36	8.00	0.19	0.50	26 00 25 50	1033 1125
2.65	0.50	0.41	0.04	c0.12	0.34	6.66	6.50	6.34	6.00	0.32	0.50	20 00	1905
7.35	1.71	1.64	1.26	c0.12	0.33	8.97	8.50	8.14	8.00	0.83	0.50	22 00	2212
6.56	1.01	0.82	0.75	a0.17	0.09	12.63	13.00	*10.84	12.00	1.79	1.00	20 25	2289
7.71	1.10	1.23	0.79	a0.20	0.11	10.37	11.00	*9.27	10.00	1.10	1.00	22 50	1023
6.60	0.98	0.82	0.01	c0.28	0.69	11.86	10.00	10.52	9.00	1.34	1.00	18 50	1665
5.06	1.71	1.65	0.76	b0.39	0.56	12.93	11.00	11.27	10.00	1.66	1.00	--------	2054
7.74	3.36	3.29	2.17	c0.44	0.75	9.76	9.00	8.23	8.00	1.53	1.00	------- 30 00 29 00	1045 1401 2130
6.57	1.61	1.65	0.95	b0.33	0.33	11.11	10.50	10.09	10.00	1.02	0.50	25 00 21 50 21 70	983 1212 2281
6.13	3.24	3.29	1.73	b0.74	0.77	11.41	10.50	9.85	10.00	1.56	0.50	32 00	982
3.06	*3.08	3.29	1.55	b0.88	0.65	11.35	10.50	10.46	10.00	0.89	0.50	29 00	1216
7.58	*2.71	3.29	1.45	a0.99	0.27	9.44	10.50	*8.48	10.00	0.96	0.50	31 50	2282
5.99	0.87	0.82	0.59	c0.09	0.19	9.21	8.50	8.57	8.00	0.64	0.50	17 00	1214
6.67	0.92	0.82	0.74	--------	--------	11.67	10.50	10.90	10.00	0.77	0.50	18 00	1213
8.87	3.17	3.30	2.21	b0.47	0.49	11.15	10.00	9.87	9.00	1.28	1.00	------- 29 50	900 2045
4.71	0.87	0.85	0.28	c0.18	0.41	10.05	9.00	8.46	8.00	1.59	1.00	18 00 19 50 23 00	1129 1207 1907
5.96	1.53	1.65	0.38	c0.40	0.75	11.19	10.00	9.02	9.00	2.17	1.00	21 50	2042
6.46	0.87	0.85	0.37	c0.15	0.35	12.14	11.00	10.86	10.00	1.28	1.00	20 50 23 50 17 50	1205 1886 2203
4.68	*1.30	1.50	0.34	b0.40	0.56	10.12	8.00	8.27	7.00	1.85	1.00	21 00 23 00	1428 1845
5.46	0.66	0.41	0.07	c0.19	0.40	10.24	9.00	8.96	8.00	1.28	1.00	20 00 16 00	1712 2664
6.65	2.39	2.00	1.17	b0.58	0.64	12.58	11.00	10.41	10.00	2.17	1.00	34 00 31 00	1148 1206
4.67	2.60	2.75	1.27	b0.55	0.78	7.55	6.00	6.21	5.00	1.34	1.00	27 00 30 50 27 00	1127 1147 1426
3.21	1.01	0.82	0.23	b0.32	0.46	9.63	9.00	8.35	8.00	1.28	1.00	------- 18 00	1918 2411
6.02	1.75	1.65	1.09	b0.33	0.33	9.95	9.00	8.67	8.00	1.28	1.00	22 50 20 00	1099 2412
5.65	2.68	2.47	2.08	b0.34	0.26	11.91	11.00	10.38	10 00	1.53	1.00	25 00	2326
10.43	0.93	0.82	0.34	b0.24	0.35	11.48	11.00	10.63	10.00	0.85	1.00	--------	1504
4.34	1.86	1.65	1.18	b0.37	0.31	12.36	11.00	10.64	10.00	1.72	1.00	29 75 25 00 23 00	1208 1363 2462

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*Deficient.

TABLE II.—NITROGEN AND PHOS

Chemist's number.	Name of Manufacturer and Brand.	Agent and Place of Sampling.
	THE HUBBARD FERTILIZER CO. OF BALTIMORE CITY, BALTIMORE, MD.	
945	Hubbard's Ammoniated Fertilizer,	H. W. Burg, East Prospect,
1061	Hubbard's Columbia Phosphate,	Wm. Shadle, Klingerstown,
2032		H. R. Stambaugh, Porters Siding,
2258	Hubbard's Dissolved Bone,	J. Harvey Miller, Ligonier,
946	Hubbard's Excelsior Mixture,	H. W. Burg, East Prospect,
1527		H. D. Rossman, Centre Hall,
2005		Hartley & Blaine, Turbotville,
1581	Hubbard's Grangers' Favorite,	E. A. Slagle, Paxinos,
1041	Hubbard's Oriental Guano,	Jacob Meck, Meckville,
1583		E. A. Slagle, Paxinos,
1648		J. B. Spera, Dillsburg,
	M. P. HUBBARD & CO., INC., BALTIMORE, MD.	
1493	Hubbard's Great Harvest,	C. N. Shaffer, Overton,
2015		Seymour Lockard, Millville,
2018		Aspers Produce Co., Aspers,
1304	Hubbard's Potato Fertilizer,	C. I. Saylor, Felton,
	INTERNATIONAL AGRICULTURAL CORPORATION (BUFFALO FERTILIZER WORKS), BUFFALO, N. Y.	
2524	Buffalo Ammoniated Phosphate,	A. P. Beight, Edinburg,
1636	Buffalo Ideal Wheat and Corn,	J. G. Robbins, Port Allegany,
2476	Buffalo Vegetable and Potato,	M. S. Comes, Smethport,
	THE JARECKI CHEMICAL CO., SANDUSKY, OHIO.	
2508	Ammoniated Phosphate,	F. F. Harrison, Edinboro,
2640		S. S. Mosholder, Rockwood,
2528	Cerela,	John W. Brownson, New Galilee,
2636	Raw Bone and Phosphate Mixture,	S. S. Mosholder, Rockwood,
	KEYSTONE BONE FERTILIZER COMPANY, PHILADELPHIA, PA.	
3161	Keystone Ammoniated Superphosphate,	Wm. M. Holbert, Warrington,
2080	Keystone Economy Grain Compound,	John Kreger, Kresgeville,
2309		William Cassel, Hummelstown,
3162	Keystone Special Penna. Grain Mixture,	Wm. M. Holbert, Warrington,
2078	Keystone Standard Potato Manure Revised.	John Kreger, Kresgeville,
2364		Samuel Rarig, Catawissa,
	KEYSTONE GRANGE EXCHANGE, MANSFIELD, PA.	
2146	Grangers Emergency Compound,	Chester Snyder, Lehighton,
	KOLLER FERTILIZER CO., SEITZLAND, PA.	
2199	Koller's One and Ten Phosphate,	Summit Lumber Co., New Freedom,
1644	Koller's Two and Twelve Phosphate,	J. W. Sheffer, Red Lion,
	THE LANCASTER BONE FERTILIZER COMPANY, LANCASTER, PA.	
1064	Ammoniated Bone Manure,	Ellwerth Erdman, Klingerstown,
1297		Josiah Flinchbaugh, Windsor,
1406	National Crop Grower,	E. G. Geyer, Brunersville,
1506		H. G. Evans, Newville,
1296	Scientific Organic Compound,	Josiah Flinchbaugh, Windsor,

a=3/5 or more, b=2/5 to 3/5, c=2/5 or less of active insoluble nitrogen.

PHORIC ACID FERTILIZERS.—Continued.

Moisture.	NITROGEN.					PHOSPHORIC ACID.						Selling price per ton at place of selection.	Chemist's number.
	Total.		Water soluble.	Insoluble.		Total.		Available.		Insoluble.			
	Found.	Guaranteed.		Active.	Inactive.	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.		
%	%	%	%	%	%	%	%	%	%	%	%	$	
8.07	2.32	2.46	1.40	b0.44	0.48	11.67	11.00	*9.63	10.00	2.04	1.00	25 00	945
3.24	1.07	0.82	0.13	b0.38	0.56	10.43	8.75	8.02	8.00	2.41	0.75	19 00 16 50	1061 2032
3.57	2.23	2.05	1.32	b0.40	0.51	12.95	11.00	10.59	10.00	2.36	1.00	30 00	2258
3.98	1.77	1.64	0.88	b0.36	0.53	12.56	11.00	10.07	10.00	2.49	1.00	22 00 26 46 23 00	946 1527 2005
2.32	0.56	0.41	0.09	b0.20	0.27	7.96	6.50	6.79	6.00	1.17	0.50	16 00	1581
5.92	1.10	0.82	0.45	c0.24	0.41	12.69	11.00	10.27	10.00	2.42	1.00	19 50 18 00 19 50	1041 1583 1648
5.79	1.66	1.66	0.89	b0.34	0.43	13.65	11.50	12.69	10.00	0.96	1.50	22 00 ------- 22 75	1493 2015 2018
5.80	2.53	2.47	1.02	b0.77	0.74	11.93	11.50	11.29	10.00	0.64	1.50	23 50	1304
8.32	1.42	1.20	1.10	c0.10	0.22	14.72	13.00	13.36	12.00	1.36	1.00	23 50	2524
9.09	1.98	1.60	1.06	b0.41	0.51	14.16	11.00	11.74	10.00	2.42	1.00	22 50	1636
3.92	2.37	2.50	1.43	b0.53	0.41	13.76	11.00	12.23	10.00	1.53	1.00	20 00	2476
8.70	0.99	0.82	0.50	c0.16	0.33	11.61	11.00	10.02	10.00	1.59	1.00	20 90 -------	2508 2640
8.02	1.68	1.65	0.82	b0.50	0.36	15.74	13.00	11.85	12.00	3.89	1.00	21 40	2528
5.96	*1.42	1.65	0.82	b0.29	0.31	17.63	16.00	8.70	8.00	8.93	8.00	24 50	2636
3.72	2.40	1.65	1.65	b0.31	0.44	11.17	12.00	10.40	10.00	0.77	2.00	22 00	3161
4.17	1.03	0.82	0.46	b0.29	0.28	11.17	10.00	9.19	9.00	1.98	1.00	17 50 -------	2080 2309
8.57	1.28	0.82	0.10	c0.32	0.86	13.80	14.00	12.65	12.00	1.15	2.00	28 00	3136
7.79	2.58	2.46	1.03	b0.82	0.73	12.00	12.00	10.15	10.00	1.85	2.00	26 00 25 25	2078 2364
8.14	2.42	2.47	1.51	b0.48	0.43	12.73	------	*10.75	12.00	1.98	------	21 00	2146
8.50	0.84	0.82	0.20	b0.26	0.38	13.01	11.00	11.29	10.00	1.72	1.00	17 50	2199
6.80	1.51	1.65	0.16	b0.71	0.64	15.41	13.00	13.31	12.00	2.10	1.00	22 75	1644
3.67	0.89	0.82	0.34	b0.23	0.32	10.27	10.00	9.12	9.00	1.15	1.00	18 50 -------	1064 1297
3.71	0.45	0.40	0.11	c0.11	0.23	8.90	9.00	8.13	8.00	0.77	1.00	21 00 18 50	1406 1506
1.84	1.46	1.40	1.13	b0.17	0.16	9.25	10.00	*8.68	9.00	0.57	1.00	--------	1296

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*Deficient.

TABLE II.—NITROGEN AND PHOS

Chemist's number.	Name of Manufacturer and Brand.	Agent and Place of Sampling.
	THE LANCASTER CHEMICAL CO., LANCASTER, PA.	
1432	No. 5 Flag Brand,	H. M. Long, Oxford,
1224	No. 6 Grain Special,	J. L. Royer, Myerstown,
1405	No. 11 Keystone Brand,	Scott Gockley, Stevens,
2292		John Smith, Lebanon,
1974	No. 15 General Crop Special,	James Hosman, Germansville,
	LEBANON FERTILIZER WORKS, LEBANON, PA.	
2366	Levan's Golden King Fertilizer,	Artie Bittner, Catawissa,
1046	Levan's Grain and Grass Fertilizer,	Hegins Grange, Hegins,
	LISTER'S AGRICULTURAL CHEMICAL WORKS, NEWARK, N. J.	
2090	Lister's Atlas Brand Fertilizer 1916,	George Bard, Leacock,
1258	Lister's Celehrated Ground Bone and Tankage Acidulated,	Ralph Eroh, Weatherly,
986	Lister's Crescent Ammoniated Superphosphate 1916,	George C. Brooks, Wellsboro,
1273		W. H. Fogelsonger, Shippensburg,
1516		John A. Minich, Carlisle,
985	Lister's Excelsior Guano 1916,	George C. Brooks, Wellsboro,
1259		Ralph Eroh, Weatherly,
2510		Talmadge & Sterritt, McKean,
1517	Lister's 2-12-0 Fertilizer,	John H. Minich, Carlisle,
1996	Lister's Grain Phosphate,	Lehuer Brothers, Bloomshurg,
1515	Lister's Lucky Strike Guano,	John H. Minich, Carlisle,
1997	Lister's Plant Food 1916,	Lehner Brothers, Bloomsburg,
2116		Henry Brouse, Winfield,
2498		Fred Sands, Chandlers Valley,
2513	Lister's Superior Ammoniated Superphosphate 1916,	J. R. Hanks, Springboro,
	FREDERICK LUDLAM CO., SUBSIDIARY OF THE AMERICAN AGRICULTURAL CHEMICAL CO., BALTIMORE, MD.	
1514	Ludlam's Cecrops Fertilizer Sickle Fertilizer No. 1, 1916,	W. S. Egulf, Carlisle,
1657		Zinn Brothers, York,
1141	Ludlam's Cecrops Fertilizer Sickle Fertilizer No. 2, 1916,	Sechrist & Ihrig, York,
1275		E. N. Diehl, Shippensburg,
898	Ludlam's Cecrops Fertilizer Sickle Fertilizer No. 3, 1916,	Ira S. Fry, Lancaster,
2570		Schettig Brothers, Ebensburg,
	THE MAPES FORMULA AND PERUVIAN CO., NEW YORK, N. Y.	
1397	Mapes Five Per Cent. Ammonia Special,	James K. Shultz, Washingtonboro,
1411	Mapes General Crop (1916 Brand),	W. H. Muth, Lititz,
2068	Mapes 1917 Special,	A. J. Wolfe, E. Stroudsburg,
	THE MARTIN FERTILIZER CO., PHILADELPHIA, PA.	
1178	Martin's Ammoniated Phosphate One Eight,	Edwin Houck, Bangor,
2192		J. F. & H. O. Newhouse, Glen Rock.
2193	Martin's Ammoniated Phosphate One Ten,	J. F. & H. O. Newhouse, Glen Rock,
1180	Martin's Ammoniated Phosphate Two Eight.	Edwin Houck, Bangor,
1312		H. W. Burg, East Prospect,
1313	Martin's Ammoniated Phosphate Two Ten,	H. W. Burg, East Prospect,
1965		Oxford Grain & Hay Co., Oxford,
1179	**Martin's** Ammoniated Phosphate Three Eight.	Edwin Houck, Bangor,
1908		H. C. Snowden, Jr., Media,
2205		H. W. Rehanyer, Turn Pike.
1181	Martin's Ammoniated Phosphate Four Eight,	Edwin Houck, Bangor,
1470		H. C. Snowden, Jr. ,Media,
939	Martin's Crop Producer,	J. P. Lippy & Son, Littlestown,
1452		William C. Ritter, Atglen,

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a=3/5 or more, b=2/5 to 3/5, c=2/5 or less of active insoluble nitrogen.

PHORIC ACID FERTILIZERS.—Continued.

Moisture.	NITROGEN.					PHOSPHORIC ACID.						Selling price per ton at place of selection.	Chemist's number.
	Total.		Water soluble.	Insoluble.		Total.		Available.		Insoluble.			
	Found.	Guaranteed.		Active.	Inactive.	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.		
%	%	%	%	%	%	%	%	%	%	%	%	$	
7.94	*0.97	1.23	0.72	c0.07	0.18	10.61	11.00	*9.33	10.00	1.28	1.00	22 00	1432
4.65	0.73	0.41	0.43	a0.18	0.12	11.71	11.00	*9.80	10.00	1.91	1.00	--------	1224
6.69	1.15	0.82	0.81	b0.16	0.18	13.27	9.00	10.97	8.00	2.30	1.00	------- -------	1405 2292
7.45	1.67	1.65	1.53	--------	--------	10.20	13.00	*8.82	12.00	1.38	1.00	--------	1974
9.35	1.03	0.82	0.48	c0.17	0.38	10.87	11.00	10.30	10.00	0.57	1.00	17 35	2366
11.54	1.60	1.64	1.03	b0.23	0.34	11.48	11.00	10.59	10.00	0.89	1.00	18 50	1046
9.40	3.97	4.11	3.19	a0.47	0.31	9.08	9.00	8.38	8.00	0.70	1.00	38 00	2090
5.85	3.14	2.67	0.81	a1.46	0.87	13.04	12.00	--------	--------	------	------	31 00	1258
6.86	1.94	1.65	1.08	b0.37	0.49	11.84	11.00	*9.74	10.00	2.10	1.00	26 00 23 00 -------	986 1273 1516
9.19	2.69	2.47	1.71	b0.46	0.52	12.53	11.00	*9.53	10.00	3.00	1.00	30 00 25 00 30 00	985 1259 2510
9.85	1.80	1.65	1.06	b0.41	0.33	13.78	13.00	11.96	12.00	1.82	1.00	--------	1517
10.74	1.44	1.23	0.79	b0.27	0.38	11.21	11.00	10.25	10.00	0.96	1.00	22 50	1996
10.72	1.66	1.65	1.08	b0.29	0.29	9.58	9.00	8.62	8.00	0.96	1.00	--------	1515
8.05	1.00	0.82	0.44	b0.23	0.33	12.07	11.00	11.05	10.00	1.02	1.00	21 00 18 75 22 80	1997 2116 2498
10.26	3.27	3.29	2.34	b0.47	0.46	12.40	11.00	10.17	10.00	2.23	1.00	30 50	2513
8.61	0.87	0.82	0.14	c0.23	0.50	12.07	11.00	10.92	10.00	1.15	1.00	------- 18 50	1514 1657
7.91	1.86	1.65	1.16	b0.30	0.40	11.43	11.00	10.03	10.00	1.40	1.00	21 50 21 25	1141 1275
5.65	2.52	2.47	1.69	b0.46	0.37	11.74	11.00	10.34	10.00	1.40	1.00	24 75 27 00	898 2570
8.53	4.02	4.12	3.46	b0.29	0.27	10.72	10.00	8.30	8.00	2.42	2.00	38 00	1397
9.48	1.62	1.65	1.28	c0.13	0.21	11.31	10.00	*7.61	8.00	3.70	2.00	24 00	1411
7.01	3.75	3.29	3.23	b0.28	0.24	9.93	10.00	*7.21	8.00	2.72	2.00	45 00	2068
6.37	1.09	0.82	0.27	c0.27	0.55	10.82	------	9.80	8.00	1.02	------	17 50 16 00	1178 2192
5.47	0.81	0.82	0.34	b0.19	0.28	12.53	------	11.23	10.00	1.30	------	19 00	2193
8.83	1.84	1.65	0.39	b0.59	0.86	11.88	------	9.39	8.00	2.49	------	21 50 20 00	1180 1312
9.37	1.67	1.65	0.59	b0.43	0.65	12.40	------	10.17	10.00	2.23	------	22 00 23 00	1313 1965
8.50	2.36	2.47	1.34	c0.37	0.65	11.14	------	9.42	8.00	1.72	------	25 00 26 75 24 00	1179 1908 2205
10.50	4.08	3.29	3.12	c0.32	0.64	8.93	------	8.04	8.00	0.89	------	29 00 30 00	1181 1470
8.50	1.39	1.03	0.62	c0.26	0.51	12.85	------	11.13	10.00	1.72	------	21 00 18 50	939 1452

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*Deficient.

TABLE II.—NITROGEN AND PHOS

Chemist's number.	Name of Manufacturer and Brand.	Agent and Place of Sampling.
	THE MILLER FERTILIZER CO., BALTIMORE, MD.	
931	Farmer's Profit,	Charles G. Carbough, Hanover,
1144		John Hayes, White Rock,
1585		C. C. Reed, Paxinos,
926	Pimlico,	John Hayes, White Rock,
1210		H. E. Myers, Muncy,
	NASSAU FERTILIZER CO., SUBSIDIARY OF THE AMERICAN AGRICULTURAL CHEMICAL CO., NEW YORK, N. Y.	
1008	Ammoniated Potato Compound,	M. A. Reardon, Little Meadows,
1545		John N. Landis, Quakertown,
2152		Lewis Husted, Dallas,
1227	Buckwheat Special,	Henry S. Lesher, Strausstown,
1486		Christian Hintz, Forksville,
2210		J. H. Bartenslager, Stewartstown,
1083	Common Sense Fertilizer 1916,	B. J. Crisman, Factoryville,
2153		Lewis Husted, Dallas,
2209		J. H. Bartenslager, Stewartstown,
1007	Old Hickory 1916,	M. A. Reardon, Little Meadows,
1740		W. S. Stuart, Carlisle,
1773		James Rentschler, Hamburg,
	NITRATE AGENCIES COMPANY, NEW YORK, N. Y.	
1734	N. A. C. Devlin Formula,	J. G. & W. Campbell, Butler,
	G. OBER & SONS COMPANY, BALTIMORE, MD.	
1668	Ober's Electro Compound,	J. H. Duttera, New Oxford,
2246		W. H. Wadding, Dayton,
950	Ober's Special Tobacco and Truck Guano,	J. F. Hurst, Hellam,
1024		A. M. Brandt, Campbelltown,
2085		B. S. Enswiler, Mt. Joy,
	PATAPSCO GUANO COMPANY, BALTIMORE, MD.	
2063	Patapsco 1-8-0 Fertilizer,	Joseph Burkholder, Hummelstown,
1678	Patapsco Ammoniated Compound,	E. C. Thomas, Gettysburg,
1281	Patapsco Fish Mixture,	Charles Bruner, New Bloomfield,
2201		J. P. Schuhart, New Freedom,
2557		Aaron Stern, Roaring Springs,
1809	Patapsco Prize Crop Compound,	C. F. Lewis, Susquehanna,
	PIEDMONT MT. AIRY GUANO CO., BALTIMORE, MD.	
1289	Levering's Standard,	Charles Dum, Elliotsburg,
1571		Clyde Shipman, Hughesville,
1979		H. F. Kistler, Wannamakers,
1978	Piedmont Blue Ribbon Fertilizer,	H. F. Kistler, Wannamakers,
2328		J. B. Bucher, Ephrata,
2455		John G. Simpson, Huntingdon,
1111	Piedmont Special Crop Grower,	John Dubbs, Bellefonte,
2340		Henry Look, Elverson,
2609		James Maust, Elk Lick,
1305	Piedmont Special Fertilizer,	C. I. Saylor, Felton,
2113		F. T. Baker, Lewisburg,
1984	Piedmont Utility Fertilizer,	Harvey Wotring, Schnecksville,
	PITTSBURGH PROVISION AND PACKING CO., PITTSBURGH, PA.	
1696	Guano Fertilizer,	W. J. Gilson, Titusville,
1873		W. N. Acklin, Beallesville,
1889		W. H. Dunlap, Jr., Canonsburg,

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a=3/5 or more, b=2/5 to 3/5, c=2/5 or less of active insoluble nitrogen.

PHORIC ACID FERTILIZERS.—Continued.

	NITROGEN.					PHOSPHORIC ACID.							
	Total.			Insoluble.		Total.		Available.		Insoluble.			
Moisture.	Found.	Guaranteed.	Water soluble.	Active.	Inactive.	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.	Selling price per ton at place of selection.	Chemist's number.
%	%	%	%	%	%	%	%	%	%	%	%	$	
5.25	1.39	1.44	0.95	b0.25	0.19	9.41	9.50	*8.71	9.00	0.70	0.50	21 00 22 00 23 00	931 1144 1585
6.77	2.65	2.47	2.10	b0.31	0.24	8.94	8.50	8.56	8.00	0.38	0.50	26 00 25 00	926 1210
8.68	2.52	2.47	1.60	b0.50	0.42	11.66	11.00	10.32	10.00	1.34	1.00	26 50 27 00 28 00	1008 1545 2152
6.08	1.19	0.82	0.71	b0.23	0.25	10.84	9.00	9.82	8.00	1.02	1.00	------- 17 00 18 00	1227 1486 2210
6.68	1.75	1.65	1.01	b0.36	0.38	12.37	11.00	10.01	10.00	2.36	1.00	24 00 23 00 22 00	1083 2153 2209
6.07	0.95	0.82	0.33	b0.25	0.37	11.28	11.00	10.26	10.00	1.02	1.00	19 00 18 00 -------	1007 1740 1773
8.07	5.76	4.92	5.34	a0.31	0.11	13.01	9.00	11.93	8.00	1.08	1.00	180 00	1734
7.12	1.12	0.82	0.46	b0.36	0.30	12.03	11.00	10.37	10.00	1.66	1.00	18 75 19 00	1668 2246
6.83	3.45	3.29	1.53	c0.55	1.37	9.93	9.00	8.27	8.00	1.66	1.00	------- 27 75 28 00	950 1024 2085
8.19	0.93	0.82	0.46	b0.20	0.27	9.30	9.00	8.28	8.00	1.02	1.00	18 00	2063
12.68	0.84	0.82	0.35	c0.18	0.31	11.37	11.00	10.41	10.00	0.96	1.00	19 00	1678
5.02	1.74	1.65	0.91	b0.37	0.46	9.83	9.00	8.24	8.00	1.59	1.00	22 00 20 00 -------	1281 2201 2557
9.36	3.35	3.29	2.37	a0.60	0.38	11.98	11.00	10.13	10.00	1.85	1.00	32 00	1809
4.65	2.12	1.65	0.39	b0.70	1.03	9.93	------	9.03	8.00	0.90	------	21 00 22 00 22 00	1289 1571 1979
10.00	2.56	2.47	1.62	b0.39	0.55	11.74	------	10.78	10.00	0.96	------	26 50 25 50 28 00	1978 2328 2455
4.62	1.05	0.82	0.48	b0.23	0.34	11.49	-----	10.41	10.00	1.08	------	20 00 20 00 18 00	1111 2340 2609
7.06	3.32	3.29	2.26	b0.45	0.61	9.06	------	8.29	8.00	0.77	------	26 00 30 00	1305 2113
8.28	1.69	1.65	0.93	b0.30	0.46	11.16	------	10.84	10.00	0.32	------	22 00	1984
2.75	2.09	1.43	0.46	b0.83	0.80	10.94	11.00	*8.39	9.00	2.55	2.00	24 00 24 00 26 00	1696 1873 1889

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*Deficient.

TABLE II.—NITROGEN AND PHOS

Chemist's number.	Name of Manufacturer and Brand.	Agent and Place of Sampling.
	THE POLLOCK FERTILIZER COMPANY, SUBSIDIARY OF THE AMERICAN AGRICULTURAL CHEMICAL CO., BALTIMORE, MD.	
941	Ammoniated Fertilizer A,	J. H. Kelly, Littlestown,
942	Ammoniated Fertilizer AA,	J. H. Kelly, Littlestown,
1097	Ammoniated Fertilizer AAA,	E. C. Ross, Lemont,
2332		John H. Hicks, Avondale,
912	Our Brand Guano,	J. G. Hall, New Providence,
2623		A. O. Beal, Sand Patch,
	PUGH & LYONS, OXFORD, PA.	
1967	B. R. P. Phosphate,	Oxford Grain & Hay Co., Oxford,
	RASIN-MONUMENTAL COMPANY, BALTIMORE, MD.	
934	Rasin's Nitro Top Dresser,	J. D. Markle, Hanover,
2226	Rasin's Potato and Vegetable Ammoniated Superphosphate,	H. B. Low & Son, Orangeville,
924	Rasin's Royal Ammoniated Superphosphate,	John Hayes, White Rock,
1785	Rasin's Royal Superphosphate,	W. H. Siegfried, Kempton,
2036		A. G. Taylor, Glenville,
2376		A. D. Kramer, Kraemer,
925	Rasin's Special Fish Mixture for Wheat, Corn and Oats,	John Hayes, White Rock,
1966		Oxford Grain & Hay Co., Oxford,
2356		H. M. Sunday, Dover,
2049	Rasin's Special Fish and Bone Guano,	Frank Boyer, Millersburg,
1522	Rasin's United Grain Ammoniated Superphosphate,	S. E. Webber, Boalsburg,
	READING BONE FERTILIZER COMPANY, READING, PA.	
1466	Animal Tankage Mixture,	Carl S. Garner, Hatboro,
1745		John E. Ritter, Carlisle,
2371		W. G. Creveling, Stillwater,
1985	Dissolved Animal Matter,	Thomas Worman, Bath,
1257	High Grade Truck Food,	John Hamm, Weatherly,
2268		C. L. Hunter, Nicholson,
2473		James Hackett, Smethport,
1987	Never Fail Crop Grower,	Thomas Worman, Bath,
1071	Reading All Crop Special,	Arthur Snyder, Jermyn,
1920		W. W. Moses, Exton,
2464		I. G. Owens, Water Street,
1054	Reading Harvest Queen,	W. H. Maurer, Hegins,
1690		G. C. Myers, Gardners,
1932		John W. Root, Kimberton,
1055	Reading Soil Enricher,	W. H. Maurer, Hegins,
1088		R. E. Ransam, Honesdale,
2474		James Hackett, Smethport,
1688	Reading Special Potato and Tobacco Manure,	G. C. Myers, Gardners,
1921		W. W. Moses, Exton,
2232		A. H. Yocum, Catawissa,
1536	Schuylkill Valley Favorite,	O. F. Bowersox, Millmont,
1986		Thomas Worman, Bath,
2263		B. B. Pickering, Galatt,
1780	Tobacco and Truck Special,	Schlegel, Adams & Co., Fleetwood,
1769	Truck, Fruit, Tree, Vine, Potato and Tobacco Grower,	John M. Stolzfus, Elverson,
	READING CHEMICAL COMPANY, READING, PA.	
1240	Early Truck, Tobacco and Potato,	D. Owen Brooke, Birdsboro,
1623		Leonard Ritter, St. Marys,
2179		H. L. McCloskey, Beech Creek,
1624	Farmers Favorite,	Leonard Ritter, St. Marys,
2176		H. L. McCloskey, Beech Creek,
2267		E. H. Barnes, Hopbottom,

a=3/5 or more, b=2/5 to 3/5, c=2/5 or less of active insoluble nitrogen.

PHORIC ACID FERTILIZERS.—Continued.

	NITROGEN.					PHOSPHORIC ACID.							
	Total.			Insoluble.		Total.		Available.		Insoluble.			
Moisture.	Found.	Guaranteed.	Water soluble.	Active.	Inactive.	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.	Selling price per ton at place of selection.	Chemist's number.
%	%	%	%	%	%	%	%	%	%	%	%	$	
9.57	0.82	0.82	0.27	c0.21	0.34	11.28	11.00	10.55	10.00	0.73	1.00	18 00	941
8.18	1.54	1.65	0.93	b0.32	0.29	11.86	11.00	10.46	10.00	1.40	1.00	20 00	942
6.63	2.62	2.47	1.79	b0.44	0.39	12.16	11.00	10.37	10.00	1.79	1.00	26 25 19 50	1097 2332
5.28	0.97	0.82	0.32	c0.25	0.40	9.83	9.00	8.75	8.00	1.08	1.00	17 00 25 00	912 2623
5.65	1.53	0.82	0.97	a0.48	0.08	18.04	7.00	--------	--------	------	------	29 00	1967
6.05	*7.85	8.24	7.11	a0.46	0.28	7.02	6.00	6.38	5.00	0.64	1.00	52 00	934
6.16	3.31	3.29	2.66	b0.35	0.30	9.81	9.00	8.92	8.00	0.89	1.00	27 75	2226
4.83	0.98	0.41	0.60	a0.27	0.11	11.66	11.00	10.45	10.00	1.21	1.00	17 00	924
3.86	0.75	0.41	0.25	b0.23	0.27	10.59	9.00	9.25	8.00	1.34	1.00	15 00 14 25 15 00	1785 2036 2376
6.28	1.03	0.82	0.69	a0.23	0.11	11.71	11.00	10.03	10.00	1.68	1.00	19 50 19 00 19 00	925 1966 2356
11.20	1.84	1.65	1.32	b0.29	0.23	13.87	12.00	11.00	11.00	2.87	1.00	22 50	2049
8.95	1.21	1.03	0.88	b0.18	0.15	12.77	11.00	10.54	10.00	2.23	1.00	19 25	1522
6.38	1.94	1.64	1.50	b0.24	0.20	16.07	15.00	14.54	14.00	1.53	1.00	28 00 25 00 26 00	1466 1745 2371
4.93	1.22	0.82	0.77	a0.27	0.18	12.39	11.00	10.35	10.00	2.04	1.00	19 00	1985
3.35	3.48	3.29	2.72	b0.36	0.40	14.03	13.00	13.01	12.00	1.02	1.00	30 50 32 00 35 00	1257 2268 2473
4.81	1.01	0.82	0.68	a0.21	0.12	11.70	11.00	10.02	10.00	1.68	1.00	22 00	1987
4.51	1.80	1.64	1.34	a0.28	0.18	11.80	11.00	10.14	10.00	1.66	1.00	23 50 26 00 --------	1071 1920 2464
7.03	1.41	1.03	0.89	b0.28	0.24	12.65	11.00	10.74	10.00	1.91	1.00	24 00 20 00 23 00	1054 1690 1932
3.13	2.82	2.46	2.24	b0.32	0.26	14.01	13.00	13.24	12.00	0.77	1.00	26 25 25 94 30 00	1055 1088 2474
4.49	0.91	0.82	0.48	b0.20	0.23	13.39	13.00	12.18	12.00	1.21	1.00	19 00 24 00 19 75	1688 1921 2232
3 35	0.73	0.41	0.19	b0.27	0.27	8.71	8.00	8.00	7.00	0.71	1.00	15 00 18 00 14 00	1536 1986 2263
3.60	2.48	2.46	1.90	b0.23	0.35	5.92	7.00	*5.60	6.00	0.32	1.00	28 00	1780
3.53	3.60	3.29	3.00	a0.42	0.18	9.59	9.00	8.38	8.00	1.21	1.00	--------	1769
5.15	*2.93	3.28	2.48	b0.20	0.25	10.92	11.00	10.22	10.00	0.70	1.00	------- 32 00 29 00	1240 1623 2179
5.00	0.87	0.82	0.44	b0.20	0.23	11.23	11.00	10.40	10.00	0.83	1.00	22 00 19 50 20 00	1624 2176 2267

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*Deficient.

TABLE II.—NITROGEN AND PHOS

Chemist's number.	Name of Manufacturer and Brand.	Agent and Place of Sampling.
1042	Farmers Meat Mixture,	Jacob Meck, Meckville,
2404		Martin Shimer, Hellertown,
2440		W. S. Watkins, Saltillo,
2256	General Crop Grower,	Thomas H. Gallentine, Scottdale,
2454		George W. Berganty, Huntingdon,
1261	Pennant Winner,	George Leninger, Weatherly,
1488		George Hugo, Eldredsville,
2294		Reuben Wenrich, Wernersville,
1338	Reading Big Crop Special,	Everett Hardware Co., Everett,
1784		W. G. Kerchner, Lenhartsville,
2177		H. L. McCloskey, Beech Creek,
2257	Reading Grain Special,	Thomas H. Gallentine, Scottdale,
2266		E. H. Barnes, Hop Bottom,
2441		W. S. Watkins, Saltillo,
1241	Reading Soil Builder,	Robert Docker, Monacacy,
2180	Reading Soil Builder,	H. L. McCloskey, Beech Creek,
1262	Royal Fish Guano,	George Leninger, Weatherly,
1774		Peter Long, Mohrsville,
2224		W. W. Parker, Rohrsburg,
	ROBERT A. REICHARD, ALLENTOWN, PA.	
1176	Ideal Truck Phosphate,	William Mittman, Easton,
2140		Ruben Kamcrer, Andreas,
1973	Universal Phosphate,	Weston Kern, Eriral,
	REICHARD HIDE AND TALLOW CO., ASHLAND, PA.	
1068	Farmer's Choice,	Victor Herring, Pitman,
2235		Fred H. Graig, Catawissa,
	F. S. ROYSTER GUANO COMPANY, BALTIMORE, MD.	
1526	Royster's Corn and Oats Fertilizer,	John Hosterman, Spring Mills,
1576		James Myers' Sons, Hughesville,
2421		Adam Krause, Rock,
994	Royster's Curfew Ammoniated Superphosphate,	Brennan & Swan, Nelson,
1803		E. K. Owens, Susquehanna,
2161		Daniel Stauffer, Zions Grove,
979	Royster's Flamingo Ammoniated Superphosphate,	Roy J. Dunham, Wellsboro,
1795		Thos. Connell, St. Joseph,
995	Royster's Penguin Ammoniated Superphosphate,	Brennan & Swan, Nelson,
1553		O. W. Bastian, Wescoesville,
1747		N. F. Reed, New Cumberland,
1110	Royster's Royal Blue Ammoniated Superphosphate,	D. S. Waite, Bellefonte,
1225		S. A. Phillippy, Myerstown,
1473		Farmers Supply Co., Milan,
	SCHAAL SHELDON FERTILIZER CO., BUFFALO, N. Y.	
1699	Ammoniated Superphosphate No. 1,	J. E. Bradley, Spartansburg,
	THE SCOTT FERTILIZER CO., ELKTON, MD.	
1156	Scott's Ammoniated Base,	Ben Mellinger, West Willow,
1765		Levi Beiler, Elverson,
1955		J. W. Brunner & Co., Belfry,
2096	Scott's Special Grain Grower,	A. B. Groff, New Holland,
2296		F. B. Gabriel, Earlville,

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a=3/5 or more, b=2/5 to 3/5, c=2/5 or less of active insoluble nitrogen.

PHORIC ACID FERTILIZERS.—Continued.

Moisture.	NITROGEN.					PHOSPHORIC ACID.						Selling price per ton at place of selection.	Chemist's number.
	Total.		Water soluble.	Insoluble.		Total.		Available.		Insoluble.			
	Found.	Guaranteed.		Active.	Inactive.	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.		
%	%	%	%	%	%	%	%	%	%	%	%	$	
3.00	0.85	0.82	0.37	c0.19	0.29	9.36	9.00	8.40	8.00	0.96	1.00	19 50 ------- 22 00	1042 2404 2440
5.73	0.91	0.82	0.48	c0.16	0.27	13.80	13.00	12.97	12.00	0.83	1.00	25 00 -------	2256 2454
4.70	2.36	2.46	1.08	c0.36	0.92	10.94	11.00	*9.79	10.00	1.15	1.00	30 00 25 00 -------	1261 1488 2294
2.45	1.80	1.64	1.12	b0.29	0.39	8.98	9.00	8.28	8.00	0.70	1.00	23 00 22 23 21 50	1338 1784 2177
2.55	0.63	0.41	0.19	c0.15	0.29	7.22	8.00	*6.52	7.00	0.70	1.00	22 00 14 00 19 50	2257 2266 2441
9.29	*1.11	1.64	0.75	c0.12	0.24	11.42	11.00	11.04	10.00	0.38	1.00	-------	1241
8.62	1.57	1.64	1.15	c0.15	0.27	11.08	11.00	10.51	10.00	0.57	1.00	22 50	2180
4.32	1.07	1.02	0.32	c0.26	0.49	12.35	13.00	*11.27	12.00	1.08	1.00	26 00 ------- 23 00	1262 1774 2224
8.15	3.14	3.28	1.01	b1.12	1.01	13.38	11.00	11.28	10.00	2.10	1.00	26 00 -------	1176 2140
7.96	1.07	0.82	0.54	b0.22	0.31	10.89	11.00	10.12	10.00	0.77	1.00	18 00	1973
5.22	1.68	1.65	0.50	b0.57	0.61	13.84	------	12.18	10.00	1.66	------	24 00 21 50	1068 2235
4.56	0.91	0.82	0.10	b0.35	0.46	9.04	8.50	8.27	8.00	0.77	0.50	16 75 18 75 20 00	1526 1576 2421
3.82	3.10	3.29	1.92	b0.63	0.55	9.73	8.50	8.45	8.00	1.28	0.50	30 00 31 00 -------	994 1803 2161
5.44	2.27	2.06	1.29	b0.45	0.53	13.42	12.50	12.40	12.00	1.02	0.50	29 00 25 00	979 1795
4.06	1.85	1.65	1.07	b0.35	0.43	11.29	10.50	10.27	10.00	1.02	0.50	24 00 20 50 24 00	995 1553 1747
5.40	1.05	0.82	0.43	b0.25	0.37	11.38	10.50	10.36	10.00	1.02	0.50	20 50 ------- 17 92	1110 1225 1473
5.57	0.83	0.82	0.37	b0.25	0.21	11.34	11.00	*9.62	10.00	1.72	1.00	22 00	1699
7.42	1.68	1.65	0.96	b0.34	0.38	14.25	------	12.66	12.00	1.59	------	26 00 22 50 25 00	1156 1765 1955
6.70	0.91	0.82	0.20	b0.29	0.42	13.02	------	11.94	10.00	1.08	------	21 00 -------	2096 2296

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*Deficient.

Chemist's number.	Name of Manufacturer and Brand.	Agent and Place of Sampling.
	M. L. SHOEMAKER & CO., LIMITED, PHILADELPHIA, PA.	
2422	Echo Super Phosphate,	N. E. Rhein, Rock,
1463	Swift-Sure Guano for Tomatoes, Truck and Corn,	Wm. J. Tyson, Horsham,
2405		M. O. Johnson, Hellertown,
2423		N. E. Rhein, Rock,
1462	Swift-Sure Super Phosphate for Tobacco and General Use,	Wm. J. Tyson, Horsham,
	H. H. SMYSER, YORK, PA.	
2029	Ammoniated Chicago Crop Grower,	H. H. Smyser, York,
	W. W. SULLIVAN, LANDENBERG, PA.	
1944	Eclipse Phosphate,	W. W. Sullivan, Landenberg,
1943	Richfield Phosphate,	W. W. Sullivan, Landenberg,
1945	Tankage Phosphate,	W. W. Sullivan, Landenberg,
	THE SUPERIOR GUANO COMPANY, BALTIMORE, MD.	
2196	General Crop Manure,	J. F. & H. O. Newhouse, Glen Rock,
2652		John H. Woy, Coleman,
2195	Gold Coin,	J. F. & H. O. Newhouse, Glen Rock,
2654		W. E. & D. B. Specht, Cantner,
2194	Grain Special 2-10-0,	J. F. & H. O. Newhouse, Glen Rock,
	SWACKS FERTILIZER WORKS, INC., DU BOIS, PA.	
2437	General Crop Grower, 1917,	Lloyd Griffith, Osterburg,
2573		John W. Eherts, Clearfield,
1627	Grain and Corn 1917,	C. Greg, Ridgway,
2124		Peter Hause, New Columbia,
2579		Hihner Hoover Hardware Co., DuBois,
1738	Grain and Grass 1917,	John K. Watson & D. A. Hankey, Parnassus,
2585		Peoples Planing Mill Co., Punxsutawney,
	SWIFT & COMPANY, INC., BALTIMORE, MD.	
1378	Ammoniated Phosphate,	I. W. Brunnell, Pleasant Mount,
2228		H. B. Low & Son, Orangeville,
2248		James McCullough, Jr., Kittanning,
1124	Cereal Fertilizer,	Brillinger & Swartz, Emigsville,
1159	Hay Grower,	J. B. Miller & Son, New Danville,
1777		D. S. Wolf, Shoemakersville,
1912	Special Corn Grower,	H. C. Snowden, Jr., Media,
2270	Special Corn Grower,	C. A. Conrad, Hopbottom,
2381	Special Corn Grower,	W. B. Winey, Middleburg,
1394	Special Diamond "A",	D. Brinser, Rheems,
2251	Swift's Special Harrison Formula,	M. C. Stewart, Indiana,
1010	Truck and Potato Fertilizer,	Alhert Dewing, Warrenham,
1393		D. Brinser, Rheems,
2410		C. R. Beers, Easton,
1817	Wheat and Rye Grower,	Horn and Devling, Galeton,
	I. P. THOMAS & SON CO., PHILADELPHIA, PA.	
1185	Fish Guano,	Titus Bachman, Hellertown,
1184	Long Island Special 4-10-0.	Titus Bachman, Hellertown,
1848		Frishee Hardware Co., Connellsville,
2150		W. W. Brace, Dallas,
1895	Thomas Triumph Manure,	Cassidy & Barber, Burgettstown,
2383		L. S. Kinger, Mifflintown,
2399		George Hayden, Kresslersville,
965	Thomas Wheat and Corn Guano,	B. R. Summer & Co., Waynesboro,
2344		Theo. M. Griffith & Son, E. Downingtown,
2624		H. L. Filke, Meyersdale,

a=3/5 or more, b=2/5 to 3/5, c=2/5 or less of active insoluble nitrogen.

PHORIC ACID FERTILIZERS.—Continued.

Moisture.	NITROGEN.					PHOSPHORIC ACID.						Selling price per ton at place of selection.	Chemist's number.
	Total.		Water soluble.	Insoluble.		Total.		Available.		Insoluble.			
	Found.	Guaranteed.		Active.	Inactive.	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.		
%	%	%	%	%	%	%	%	%	%	%	%	$	
5.25	1.79	1.23	0.71	b0.59	0.49	13.93	10.00	9.47	7.00	4.46	3.00	22 00	2422
7.50	2.20	1.65	1.19	b0.57	0.44	13.22	10.00	9.84	8.00	3.38	2.00	23 00 22 00 23 00	1463 2405 2423
8.14	3.35	3.29	1.44	a1.40	0.51	13.90	12.00	11.09	9.00	2.81	3.00	30 00	1462
6.61	1.19	0.82	0.44	b0.30	0.45	17.45	13.00	12.54	12.00	4.91	1.00	21 00	2029
5.77	1.09	1.03	0.29	b0.32	0.48	13.18	------	11.05	7.00	2.13	------	27 00	1944
7.46	1.84	1.65	0.35	b0.80	0.69	15.83	------	10.22	8.00	5.61	------	32 00	1943
6.23	0.70	0.82	0.17	c0.15	0.38	13.62	------	12.73	6.00	0.89	------	22 00	1945
6.67	1.30	1.00	0.32	b0.43	0.55	14.06	11.00	10.81	10.00	3.25	1.00	20 00 19 00	2196 2652
3.86	1.03	0.82	0.11	b0.39	0.53	12.35	9.00	9.03	8.00	3.32	1.00	16 00 19 00	2195 2654
5.59	*1.35	1.65	0.82	b0.25	0.28	14.62	11.00	12.77	10.00	1.85	1.00	21 00	2194
3.27	1.70	1.65	0.82	c0.26	0.62	9.22	9.00	7.82	8.00	1.40	1.00	21 36 25 00	2437 2573
2.38	*0.62	0.85	0.17	c0.12	0.33	9.18	9.00	8.67	8.00	0.51	1.00	22 00 19 00 20 00	1627 2124 2579
3.79	*1.43	1.65	0.69	c0.23	0.51	11.26	11.00	*9.73	10.00	1.53	1.00	28 00 22 00	1738 2585
3.39	0.87	0.82	0.25	c0.23	0.39	11.49	------	10.34	10.00	1.15	------	19 00 18 00 21 00	1378 2228 2248
5.28	0.81	0.82	0.34	c0.16	0.31	9.95	------	9.12	9.00	0.83	------	19 00	1124
6.20	3.19	3.29	1.69	b0.73	0.77	9.98	------	8.26	8.00	1.72	------	29 00 -------	1159 1777
4.55	*1.19	1.65	0.36	b0.46	0.37	12.64	------	11.19	10.00	1.45	------	24 00	1912
4.00	*1.40	1.65	0.17	b0.63	0.60	8.46	------	*7.82	10.00	0.64	------	30 00	2270
4.41	1.50	1.65	0.54	b0.49	0.47	10.63	------	*9.74	10.00	0.89	------	-------	2381
4.81	*2.00	2.47	0.72	b0.54	0.74	10.52	------	9.44	8.00	1.08	------	25 50	1394
6.73	3.45	3.29	1.66	b0.84	0.95	12.74	------	10.38	10.00	2.36	------	30 60	2251
5.68	*3.00	3.29	1.67	b0.76	0.57	9.57	------	8.29	8.00	1.28	------	29 00 29 00 -------	1010 1393 2410
6.59	1.63	1.65	1.48	--------	--------	8.87	------	8.68	8.00	0.19	------	26 00	1817
8.27	*3.79	4.10	2.47	a0.96	0.36	11.97	10.50	10.15	10.00	1.82	0.50	34 00	1185
8.68	3.38	3.25	2.42	b0.43	0.53	11.84	10.50	10.69	10.00	1.15	0.50	34 00 38 00 31 00	1184 1848 2150
5.29	0.86	0.82	0.32	b0.23	0.31	12.07	10.50	10.48	10.00	1.59	0.50	23 00 18 50 18 00	1895 2383 2399
8.43	1.78	1.65	1.25	b0.22	0.31	11.61	10.50	10.53	10.00	1.08	0.50	23 70 24 00 20 50	965 2344 2624

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*Deficient.

TABLE II.—NITROGEN AND PHOS

Chemist's number.	Name of Manufacturer and Brand.	Agent and Place of Sampling.
	JAMES THOMAS, WILLIAMSPORT, PA.	
1218	Thomas' Special Compound for Wheat, Oats, Corn and Grass,	James Thomas, Williamsport,
1217	Thomas' Standard Brand Phosphate,	James Thomas, Williamsport,
	JACOB TRINLEY & SONS, LINFIELD, PA.	
1958	Favorite Phosphate,	John H. Farringer, Norristown,
	F. W. TUNNEL & CO., INC., PHILADELPHIA, PA.	
1441	1917 Excelsior Phosphate,	Edw. Brinton & Sons, West Chester,
1558		W. M. German, East Macungie,
1437	1917 Fish Manure,	Edw. Brinton & Sons, West Chester,
1439	1917 Lightning Guano,	Edw. Brinton & Sons, West Chester,
1438	1917 No. 1 Potato and Truck Manure,	Edw. Brinton & Sons, West Chester,
1559	1917 Potato and Vegetable Manure,	W. M. German, East Macungie,
1440	Wheat Grower,	Edw. Brinton & Sons, West Chester,
	TUSCARORA FERTILIZER CO., BALTIMORE, MD.	
2009	Tuscarora (1-8-0),	Afred Litchard, Turbotville,
2114	Tuscarora (1-10-0),	J. H. Wingart, Lewisburg,
2241		William Gates Estate, Kittanning,
2603	Tuscarora (1.50-9-0),	A. M. Frederick, Jr., Fairchance,
2007	Tuscarora (2-10-0),	Alfred Litchard, Turbotville,
	THE E. J. TYGERT COMPANY, BY THE AMERICAN AGRICULTURAL CHEMICAL CO., PHILADELPHIA, PA.	
1372	Ammoniated Fertilizer A,	Earl Curits, Ariel,
2206		H. W. Rehanyer, Turn Pike,
2417		Charles Maurer, Hepler,
1230	Ammoniated Fertilizer AA,	John C. Donkel, Robesonia,
1792		Worth Jennings, Towanda,
2413		R. F. Brown, Easton,
1186	Ammoniated Fertilizer AAA,	Lovine Lerch, Bethlehem,
1221		Gheen, Spigelmyer & Phleger, Antes Fort,
1787		W. H. Siegfried, Kempton,
1786	Great Advancer Phosphate 1916,	W. H. Siegfried, Kempton,
2077		D. C. Kunkle, Kresgeville,
	UNION CHEMICAL WORKS, INC., NORTH WALES, PA.	
2334	Two Ten Mixture,	John D. Frantz, Providence Square,
	VIRGINIA-CAROLINA CHEMICAL COMPANY OF DELAWARE, BALTIMORE, MD.	
2001	V. C. High Grade Ammoniated Superphosphate,	H. A. Snyder, Strawberry Ridge,
	WASHINGTON, ALEXANDER AND COOKE COMPANY, CHARLES TOWN, W. VA.	
1684	W. A. & C.'s Farmers Friend,	E. S. Kelly, Gettysburg,
904	W. A. & C.'s Regular Corn Mixture,	Albert Herr, Quarryville,
1683		E. S. Kelly, Gettysburg,
	THE ROBERT A. WOOLRIDGE COMPANY, BALTIMORE, MD.	
1531	Woolridge's Old Fidelity Phosphate,	C. C. Catherman, Hartelton,
2002		H. V. Smith, Turbotville,
2041	Woolridge's Special Wheat and Grass Grower,	S. S. Sheller, Duncannon,

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a=3/5 or more, b=2/5 to 3/5, c=2/5 or less of active insoluble nitrogen.

PHORIC ACID FERTILIZERS.—Continued.

	NITROGEN.					PHOSPHORIC ACID.						Selling price per ton at place of selection.	Chemist's number.
	Total.			Insoluble.		Total.		Available.		Insoluble.			
Moisture.	Found.	Guaranteed.	Water soluble.	Active.	Inactive.	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.		
%	%	%	%	%	%	%	%	%	%	%	%	$	
7.51	1.05	0.82	0.45	b0.24	0.36	10.82	10.00	9.65	9.00	1.17	1.00	22 00	1218
8.33	0.91	0.82	0.20	c0.24	0.47	10.36	9.00	9.28	8.00	1.08	1.00	20 00	1217
12.56	*1.44	1.65	0.52	b0.38	0.54	11.49	11.00	*9.64	10.00	1.85	1.00	25 50	1958
5.08	1.11	0.82	0.28	b0.38	0.45	8.23	7.00	6.38	6.00	1.85	1.00	21 00 24 00	1441 1558
6.85	2.25	1.64	1.40	b0.47	0.38	11.90	11.00	*8.86	10.00	3.04	1.00	28 00	1437
8.50	*3.84	4.12	2.19	a1.09	0.56	10.18	9.00	*6.86	8.00	3.32	1.00	35 00	1439
8.40	3.35	3.30	2.02	b0.78	0.55	11.70	11.00	*8.57	10.00	3.13	1.00	35 00	1438
8.40	1.89	1.64	1.04	b0.36	0.49	11.72	11.00	10.53	10.00	1.19	1.00	20 00	1559
5.91	1.56	0.82	0.31	c0.40	0.85	11.24	10.00	*8.31	9.00	2.93	1.00	24 00	1440
4.29	1.47	0.82	0.06	b0.57	0.84	9.02	8.50	8.32	8.00	0.70	0.50	16 50	2009
5.93	0.96	0.82	0.35	b0.25	0.36	11.90	10.50	10.69	10.00	1.21	0.50	17 25 24 00	2114 2241
2.91	1.23	1.23	0.38	b0.44	0.41	10.10	9.50	*8.15	9.00	1.95	0.50	23 00	2603
6.09	1.70	1.65	0.56	b0.54	0.60	11.31	10.50	10.00	10.00	1.31	0.50	19 65	2007
6.40	1.05	0.82	0.46	b0.27	0.32	11.15	11.00	10.38	10.00	0.77	1.00	22 00 17 50 -------	1372 2206 2417
6.02	1.70	1.65	1.02	b0.37	0.31	11.93	11.00	10.85	10.00	1.08	1.00	24 00 21 00 21 50	1230 1792 2413
7.59	2.43	2.47	1.58	b0.44	0.41	12.11	11.00	10.20	10.00	1.91	1.00	------- 24 00 25 00	1186 1221 1787
8.60	3.39	3.29	1.60	a1.12	0.67	12.07	11.00	10.09	10.00	1.98	1.00	29 00 29 00	1786 2077
4.34	1.67	1.64	1.23	b0.25	0.19	11.03	------	10.01	10.00	1.02	------	24 65	2334
4.55	2.80	2.47	2.10	a0.45	0.25	10.63	11.00	*8.65	10.00	1.98	1.00	25 00	2001
4.10	0.90	0.82	0.26	b0.34	0.30	9.69	9.00	8.86	8.00	0.83	1.00	17 00	1684
7.28	1.24	1.00	0.80	b0.22	0.22	12.03	11.00	10.24	10.00	1.79	1.00	18 25 18 25	904 1683
7.01	1.75	1.65	0.91	b0.34	0.50	11.57	11.00	10.04	10.00	1.53	1.00	22 36 22 50	1531 2002
12.17	1.30	1.23	0.82	b0.21	0.27	11.98	11.00	10.70	10.00	1.28	1.00	27 00	2041

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*Deficient.

TABLE II.—NITROGEN AND PHOS

Chemist's number.	Name of Manufacturer and Brand.	Agent and Place of Sampling.
	THE WOOLRIDGE FERTILIZER COMPANY, BALTIMORE, MD.	
2016	Woolridge's Special No. 1,	Grant Johnson, Millville,
2216	Woolridge's Special No. 2,	Grant Johnson, Millville,
	YORK CHEMICAL WORKS, YORK, PA.	
922	Dempwolf's Black Cross,	Brown & Rea, Peach Bottom,
928		M. J. Sheffer, Hanover,
2562		Wallace Sherbine, Wilmore,
2131	Dempwolf's Codorus,	Steininger Brothers, Middleburg,
1645	Dempwolf's Corn and Oats,	J. B. Spera, Dillsburg,
2191		A. T. Baird, Lock Haven,
2607		P. C. Miller, Meyersdale,
1763	Dempwolf's Crop Grower,	Mt. Holly Feed & Grain Co., Mt. Holly Springs,
2357	Dempwolf's Dauphin Brand,	C. F. Beck, York,
1254	Dempwolf's Early Trucker,	Harry Keffer, Pine Grove,
2166	Dempwolf's Potato and Truck,	Frank Lindner, Ringtown,
2365		Warren Stine, Catawissa,
2561		Wallace Sherbine, Wilmore,
1925	Dempwolf's Prosperity,	Thomas Haines Co., Malvern,
1402	Dempwolf's R. B. Special,	Harry Summy, Landisville,
1647		A. C. Hartmon, Dillsburg,
2186		A. T. Baird, Lock Haven,
1521	Dempwolf's Red Cross,	Progress Grange, Centre Hall,
2023		D. E. Brandt, East Berlin,
1106	Dempwolf's Royal Mixture,	E. C. Musser, State College,
1253		Harry Keffer, Pine Grove,
1923		Thomas Haines Co., Malvern,
1255	Dempwolf's Top Dresser,	Harry Keffer, Pine Grove,
		Average,

a=3/5 or more, b=2/5 to 3/5, c=2/5 or less of active insoluble nitrogen.

PHORIC ACID FERTILIZERS.—Concluded.

Moisture.	NITROGEN.					PHOSPHORIC ACID.						Selling price per ton at place of selection.	Chemist's number.
	Total.		Water soluble.	Insoluble.		Total.		Available.		Insoluble.			
	Found.	Guaranteed.		Active.	Inactive.	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.		
6.17	1.69	1.64	0.87	b0.35	0.47	11.08	10.50	9.87	10.00	1.21	0.50	19 30	2016
7.65	1.30	1.03	0.46	b0.35	0.49	9.69	8.50	9.50	8.00	0.19	0.50	22 63	2216
4.92	0.88	0.82	0.49	b0.17	0.22	9.80	8.50	8.84	8.00	0.96	0.50	17 00 17 50 20 00	922 928 2562
5.91	0.49	0.42	0.12	c0.10	0.27	13.06	10.50	11.08	10.00	1.98	0.50	17 00	2131
8.77	2.78	2.47	1.88	b0.37	0.53	11.12	10.50	9.97	10.00	1.15	0.50	27 00 23 62 26 00	1645 2191 2607
6.95	0.94	0.82	0.46	b0.19	0.29	11.91	10.50	10.89	10.00	1.02	0.50	18 50	1763
7.65	1.46	1.23	0.89	c0.16	0.41	13.44	12.50	11.89	12.00	1.53	0.50	17 10	2357
2.93	5.06	4.94	3.83	b0.59	0.64	10.70	8.50	9.74	8.00	0.96	0.50	--------	1254
4.87	4.12	4.11	2.92	b0.56	0.64	9.68	8.50	9.04	8.00	0.64	0.50	-------- -------- 35 00	2166 2365 2561
9.80	1.73	1.65	1.20	b0.21	0.32	13.01	12.50	12.00	12.00	1.01	0.50	24 00	1925
6.93	2.13	2.06	1.39	b0.30	0.44	12.53	10.50	10.68	10.00	1.85	0.50	35 00 -------- 28 00	1402 1647 2186
5.25	1.30	1.23	0.61	c0.23	0.46	11.81	10.50	10.60	10.00	1.21	0.50	18 86 19 00	1521 2023
8.87	1.88	1.65	1.35	b0.21	0.32	11.43	10.50	10.47	10.00	0.96	0.50	22 60 -------- 23 00	1106 1253 1923
6.74	7.19	5.76	6.12	b0.57	0.50	9.85	7.50	7.30	7.00	2.55	0.50	--------	1255
6.14	1.86	------	------	------	------	11 53	------	10.01	------	1.51	------	23 93	------

*Deficient.

TABLE NO. III.—GROUND

Furnishing Nitrogen

Chemist's number.	Name of Manufacturer and Brand.	Agent and Place of Sampling.
	THE AMERICAN AGRICULTURAL CHEMICAL CO., NEW YORK, N. Y.	
1368	Fine Ground Bone,	Farmers' Supply Co., Ariel,
1653		George E. Detrich, York Springs,
1852		Dull & Co., Connellsville,
1947	High Grade Ground Bone,	Milhous Brothers, Mendenhall,
1420	Pure Raw Bone,	H. P. Passmore & Bro., Oxford,
2534		H. L. Stultz & Bro., Altoona,
	ARMOUR FERTILIZER WORKS, INC., BALTIMORE, MD.	
1199	Bone Meal 3-48,	Mitchell Farm, Brandamore,
2345		Theo. M. Griffith & Son, E. Downingtown,
2393		J. F. Harshbarger, Strodes Mills,
2089	Raw Bone Meal 4½-47,	Sam Bard, Leacock,
	BAUGH & SONS COMPANY, PHILADELPHIA, PA.	
1942	Baugh's Pure Steamed Bone,	W. W. Sullivan, Landenberg,
2333		J. Walter Jones, Clifton,
1915	Baugh's Raw Bone Meal—Warranted Pure,	E. A. & J. L. Pennock, Chatham,
2160		F. H. Houseknecht, Cunyngham,
2569		Edwards Hardware Co., Ebensburg,
	THE BERG COMPANY, PHILADELPHIA, PA.	
1951	Berg's Raw Bone Fine,	Edward F. Bracken, Paoli,
	BOWKER FERTILIZER COMPANY, SUBSIDIARY OF THE AMERICAN AGRICULTURAL CHEMICAL CO., NEW YORK, N. Y.	
1635	Bowker's Fresh Ground Bone,	J. A. Stoll & Co., Kane,
1693		Kernochan & Co., Titusville,
2273		A. E. Seamans, Factoryville,
	JAMES G. DOWNWARD CO., COATESVILLE, PA.	
1451	Pure Ground Bone,	Edw. Tingley, New London,
	GRIFFITH & BOYD COMPANY, BALTIMORE, MD.	
1429	Pure Fine Ground Bone Meal,	Passmore & Co., Nottingham,
1435	Soft Ground Bone Meal,	Theo. S. Golder, West Chester,
	THE HUBBARD FERTILIZER CO. OF BALTIMORE CITY, BALTIMORE,, MD.	
2260	Hubbard's Pure Raw Bone,	J. Harvey Miller, Ligonier,
	LANCASTER CHEMICAL CO., LANCASTER, PA.	
2315	No. 9 Bone Meal,	J. S. Denlinger, Gordonville,
	LEBANON FERTILIZER WORKS, LEBANON, PA.	
1050	Levan's Pure Fine Ground Bone Meal,	Hegins Grange, Hegins,
2360	Levan's Pure Fine Ground Bone Meal,	Artic Bittner, Catawissa,
	THE MARTIN FERTILIZER CO., PHILADELPHIA, PA.	
1469	Martin's Pure Ground Bone,	H. C. Snowden, Jr., Media,

BONE FERTILIZERS.

and Phosphoric Acid.

Moisture.	CHEMICAL ANALYSIS.				MECHANICAL ANALYSIS.		Selling price per ton at place of selection.	Chemist's number.
	NITROGEN.		PHOSPHORIC ACID.					
	Found.	Guaranteed.	Found.	Guaranteed.	Fine.	Coarse.		
%	%	%	%	%	%	%	$	
3.28	3.05	2.47	24.59	22.88	51	49	37 50 36 50 42 00	1368 1653 1852
5.58	3.50	3.29	24.54	20.59	45	55	42 00	1947
6.07	3.76	3.70	21.79	21.51	61	39	41 00 50 00	1420 2534
3.07	2.90	2.47	24.58	22.00	65	35	35 60 40 00 36 50	1199 2345 2396
8.08	4.21	3.70	23.47	21.50	59	41	41 00	2089
6.06	1.94	1.65	*23.88	25.00	72	28	35 00 32 00	1942 2333
6.77	4.00	3.70	*20.21	21.50	65	35	42 00 ---------- 41 00	1915 2160 2569
5.80	3.75	2.99	*21.75	22.00	55	45	40 00	1951
9.35	2.85	2.47	24.39	22.88	61	39	40 00 36 00 38 00	1635 1693 2273
3.04	2.89	2.88	22.12	20.00	58	42	39 00	1451
7.14	3.63	3.30	*19.52	22.00	51	49	42 00	1429
3.62	2.50	2.50	12.28	11.00	66	34	----------	1435
7.30	3.97	3.69	*21.74	22.50	31	69	45 00	2260
8.41	*3.11	3.70	24.72	20.00	70	30	36 00	2315
5.23	2.39	2.55	*23.79	27.00	54	46	35 00	1050
3.67	*2.17	2.55	*19.68	27.00	38	62	35 15	2360
10.89	2.14	1.65	*22.65	22.90	61	39	36 00	1469

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*Deficient.

TABLE III.—GROUND

Chemist's number.	Name of Manufacturer and Brand.	Agent and Place of Sampling.
	HENRY F. MITCHELL CO., PHILADELPHIA, PA.	
1950	Mitchell's Fine Ground Bone,	R. F. Matthews Sons, Paoli,
	PITTSBURGE PROVISION & PACKING CO., PITTSBURGH, PA.	
1344	No. 1 Pure Raw Bone Meal,	The I. W. Scott Co., Pittsburgh,
1343	Pure Raw Bone Meal,	The I. W. Scott Co., Pittsburgh,
	PUGH & LYONS, OXFORD, PA.	
1968	Ground Raw Bone,	Oxford Grain & Hay Co., Oxford,
	READING BONE FERTILIZER CO., READING, PA.	
2561	Pure Bone Meal,	A. F. Stutsman, Johnstown,
2088	Pure Raw Bone,	John Biler, Leola,
	F. S. ROYSTER GUANO COMPANY, BALTIMORE, MD.	
2502	Royster's Pure Raw Bone Meal,	C. E. Fredell, Mt. Jewett,
	W. W. SULLIVAN, LANDENBERG, PA.	
1941	Ground Bone,	W. W. Sullivan, Landenberg,
	F. W. TUNNEL & CO., INC., PHILADELPHIA, PA.	
1446	Pure Ground Bone,	Edw. Brinton & Sons, West Chester,
		Average,

BONE FERTILIZERS.—Concluded.

Moisture.	CHEMICAL ANALYSIS.				MECHANICAL ANALYSIS.		Selling price per ton at place of selection.	Chemist's number.
	NITROGEN.		PHOSPHORIC ACID.					
	Found.	Guaranteed.	Found.	Guaranteed.	Fine.	Coarse.		
%	%	%	%	%	%	%	$	
5.96	2.94	2.47	17.55	16.49	61	39	40 00	1950
5.76	4.42	3.70	22.54	22.00	57	43	36 00	1344
5.85	6.59	3.70	*14.48	21.00	52	48	34 00	1343
6.59	3.82	3.29	22.49	20.00	35	65	41 00	1968
4.83	3.43	2.46	25.28	18.00	55	45	38 00	2564
5.21	3.57	3.29	23.60	18.00	50	50	40 00	2088
5.84	3.70	3.70	24.39	21.50	44	56	40 00	2502
4.85	3.08	2.47	23.69	18.00	67	33	38 00	1941
3.15	*1.31	2.46	28.15	23.00	61	39	38 00	1446
5.79	3.25	------------	22.53	------------	57	43	38 80	--------

*Deficient.

TABLE NO. IV.—ACIDULATED

Furnishing

Chemist's number.	Name of Manufacturer and Brand.	Agent and Place of Sampling.
	THE AMERICAN AGRICULTURAL CHEMICAL CO., NEW YORK, N. Y.	
973	14% Acid Phosphate,	Nickles & Stewart, Shippensburg,
1820		Henry J. Theis, Germania,
1844		King Brothers, Uniontown,
908	16% Acid Phosphate,	John Greenleaf, Quarryville,
976		Roy J. Dunham, Wellsboro,
1601		T. R. Bolton, Cochranton,
1021	18% Acid Phosphate,	Farmers' Co-operative Co., Wysox,
1839		Harvey S. Yoder, Elk Lick,
1130	Apex Acid Phosphate,	Sam M. Wolf, York,
1334		H. F. Gump & Son, Everett,
2541		H. L. Stultz & Son, Hollidaysburg,
1249	Basic Lime Phosphate,	R. W. Daub, Muir,
1939		J. K. Lewis, Honeybrook,
2172		Samuel Heisler, Tamaqua,
1853	W. S. Farmer & Co. High Grade Superphosphate,	Dull & Co., Connellsville,
2637		E. J. Sipe, Rockwood,
1418	Susquehanna Dissolved S. C. Rock,	H. P. Passmore & Bro., Oxford,
1651		J. J. Jacobs, York Springs,
1650	Susquehanna High Grade Superphosphate,	J. J. Jacobs, York Springs,
2070	Wheeler's High Grade Acid Phosphate,	George Allegar, Bartonsville,
2445		Puchy & Co., Rockhill Furnace,
2546		A. J. Morris, Williamsburg,
	AMERICAN FERTILIZING CO., BALTIMORE, MD.	
1530	16% Acid Phosphate,	J. H. Neidigh, State College,
1802	American High Grade Acid Phosphate,	Brant Brothers, Great Bend,
2101		L. J. Denlinger, Lancaster,
1528	High Grade Acid Phosphate,	J. H. Neidigh, State College,
	ARMOUR FERTILIZER WORKS, INC., BALTIMORE, MD.	
1198	Acid Phosphate, 16%,	Mitchell Farm, Brandamore,
1424		Passmore & Co., Nottingham,
2460		Ralph Gregory, Petersburg,
1716	Star Phosphate, 14%,	Harmony Cereal Mills, Harmony,
	ATLANTIC FERTILIZER WORKS (SWIFT & COMPANY, INC., OWNERS), BALTIMORE, MD.	
1574	Atlantic Dissolved Phosphate,	Clyde Shipman, Hughesville,
	BALTIMORE FERTILIZER CO., BALTIMORE, MD.	
953	Honest 16% Acid Phosphate,	Chambersburg Fertilizer Works, Chambersburg,
	BAUGH & SONS COMPANY, BALTIMORE, MD.	
1012	Baugh's 16% Acid Phosphate,	A. L. Burlington, Rummerfield,
1123		Brillinger & Swartz, Emigsville,
2545		H. L. Stultz & Bro., Williamsburg,
961	Baugh's High Grade Acid Phosphate,	D. M. Wertz & Co., Quincy,
1444		Edw. Brinton & Sons, West Chester,
2107		H. K. Hershey, Leaman Place,

PHOSPHATE FERTILIZERS.

Phosphoric Acid.

Moisture.	PHOSPHORIC ACID.						Selling price per ton at place of selection.	Chemist's number.
	TOTAL.		AVAILABLE.		INSOLUBLE.			
	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.		
%	%	%	%	%	%	%	$	
							17 50	973
5.03	15.12	15.00	14.48	14.00	0.64	1.00	18 00	1820
							21 00	1844
							16 50	908
7.65	17.35	17.00	16.65	16.00	0.70	1.00	21 50	976
							19 00	1601
7.45	18.51	19.00	18.32	18.00	0.19	1.00	18 70	1021
							----------	1839
							----------	1130
4.83	11.48	11.00	10.52	10.00	0.96	1.00	15 75	1334
							15 00	2541
							18 00	1249
1.27	14.78	----------	13.82	13.00	0.96	----------	22 00	1939
							17 00	2172
7.52	17.30	17.00	17.04	16.00	0.26	1.00	24 00	1853
							16 75	2637
7.06	15.49	15.00	14.72	14.00	0.77	1.00	17 50	1418
							----------	1651
9.63	17.36	17.00	16.98	16.00	0.38	1.00	----------	1650
							23 00	2070
7.79	17.09	17.00	16.07	16.00	1.02	1.00	18 00	2445
							18 00	2546
3.84	12.09	11.00	11.26	10.00	0.83	1.00	15.25	1530
7.19	17.83	17.00	17.00	16.00	0.83	1.00	17 00	1802
							16 50	2101
8.27	16.20	15.00	15.05	14.00	1.15	1.00	17 00	1528
							16 00	1198
5.12	17.92	16.50	17.03	16.00	0.89	0.50	17 50	1424
							18 00	2460
4.07	17.27	14.50	17.17	14.00	0.10	0.50	20 00	1716
4.07	17.35	----------	16.27	16.00	1.08	----------	18 25	1574
5.60	18.18	17.00	17.54	16.00	0.64	1.00	----------	953
							16 25	1012
7.84	18.00	----------	16.47	16.00	1.53	----------	17 00	1123
							18 00	2545
							16 00	961
8.78	17.50	----------	16.86	14.00	0.64	----------	17 00	1444
							16 00	2107

TABLE IV.—ACIDULATED

Chemist's number.	Name of Manufacturer and Brand.	Agent and Place of Sampling.
	BOWKER FERTILIZER COMPANY, SUBSIDIARY OF THE AMERICAN AGRICULTURAL CHEMICAL CO., NEW YORK, N. Y.	
1614	Bowker's 12% Acid Phosphate,	Kernochan & Co., Titusville,
1894		A. C. McClure, Burgettstown,
2370		J. A. Kimbel, Elysburg,
1104	Bowker's 16% Acid Phosphate,	J. C. Mattern, Warriors Mark,
1639		John Learn, Eldred,
1857		Dorsey Brothers, West Brownsville,
1878	Bowker's Soluble Phosphate,	C. S. Hunter Co., Washington,
2278		Freem Rogers, Sugar Run,
	THE CENTRAL CHEMICAL CO. (THOMAS FERTILIZER WORKS) HAGERSTOWN, MD.	
1329	C. C. C. Dissolved Phosphate 12%,	Francis Baker, Everett,
1863		Lloyd A. Hay, Meyersdale,
2028	C. C. C. Dissolved Phosphate 16%,	W. L. Glatfelter, Spring Grove,
2379		C. G. Pellman, Richfield,
2611		W. J. Vought, Elk Lick,
	THE CHESAPEAKE CHEMICAL COMPANY, BALTIMORE, MD.	
2433	C. C. Co's. 14% Dissolved Phosphate,	J. L. Longenecker, Woodbury,
	COE-MORTIMER COMPANY, SUBSIDIARY OF THE AMERICAN AGRICULTURAL CHEMICAL CO., NEW YORK, N. Y.	
899	E. Frank Coe's 16% Superphosphate,	C. W. Reno, Hemburg,
1079		The Abington Lumber Co., Dalton,
2518		John W. White, Jamestown,
	COLUMBIA GUANO COMPANY, BALTIMORE, MD.	
992	Columbia 14% Acid Phosphate,	M. U. Benson, Mansfield,
1609		P. F. Schaal, Cochranton,
1931		John W. Root, Kimberton,
989	Columbia High Grade 16% Acid Phosphate,	M. U. Benson, Mansfield,
	THE CONSUMERS CHEMICAL CORPORATION, NEW YORK, N. Y.	
1374	Consumers' High Grade Acid Phosphate,	B. F. Kennedy, Pleasant Mount,
2184		E. H. Hays, Clintondale,
2388		J. D. Graybill & Son, Belleville,
1090	Consumers' Pure-Sure Acid Phosphate,	Murray & Co., Honesdale,
	HENRY COPE & CO., LINCOLN UNIVERSITY, PA.	
2352	Acid Phosphate,	Lyburn Whitaker, Oxford,
	JOSIAH COPE & COMPANY, SUBSIDIARY OF THE AMERICAN AGRICULTURAL CHEMICAL CO., BALTIMORE, MD.	
2341	High Grade Superphosphate,	W. B. Passmore, Embreeville,
2459		J. C. Henderson, Petersburg,
	EASTERN GUANO CO., NEW YORK, N. Y.	
952	Eastern Dissolved Phosphate, 14 per cent.,	Diehl, Omwake & Diehl, Chambersburg,
951	Eastern Dissolved Phosphate, 16 per cent.,	Diehl, Omwake & Diehl, Chambersburg,
	FARMERS FERTILIZER WORKS, ELIZABETHTOWN, PA.	
2391	Acid Phosphate 16%,	J. D. Graybill & Son, Belleville,

PHOSPHATE FERTILIZERS.—Continued.

	PHOSPHORIC ACID.						Selling price per ton at place of selection.	Chemist's number.
	TOTAL.		AVAILABLE.		INSOLUBLE.			
Moisture.	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.		
%	%	%	%	%	%	%	$	
4.35	13.50	13.00	12.48	12.00	1.02	1.00	20 00 22 00 17 00	1614 1894 2370
5.46	17.71	17.00	17.07	16.00	0.64	1.00	19 50 20 00 ------------	1104 1639 1857
5.11	15.28	15.00	14.39	14.00	0.89	1.00	20 50 16 50	1878 2278
7.77	14.12	------------	13.23	12.00	0.89	------------	16 00 15 00	1329 1863
8.71	17.53	------------	16.83	16.00	0.70	------------	------------ ------------ 16 50	2028 2379 2611
8.31	16.40	15.00	16.40	14.00	trace	1.00	18 50	2433
7.72	17.08	17.00	16.51	16.00	0.57	1.00	13 30 22 00 18 00	899 1079 2518
5.95	16.75	14.50	15.98	14.00	0.77	0.50	14 00 17 50 18 00	992 1609 1931
6.56	17.27	16.50	16.76	16.00	0.51	0.50	15 00	989
7.90	18.34	17.00	17.19	16.00	1.15	1.00	17 00 16 00 18 50	1374 2184 2388
3.85	16.12	15.00	15.74	14.00	0.38	1.00	18 00	1090
7.52	17.78	------------	17.08	16.00	0.70	------------	18 00	2352
6.31	17.13	17.00	16.49	16.00	0.64	1.00	16.75 18 00	2341 2459
9.97	15.05	------------	13.99	14.00	1.06	------------	16 00	952
10.07	16.90	------------	15.94	16.00	0.96	------------	17 00	951
7.48	18.25	17.00	16.53	16.00	1.72	1.00	18 50	2391

TABLE IV.—ACIDULATED

Chemist's number.	Name of Manufacturer and Brand.	Agent and Place of Sampling.
	GODFREY CO-OPERATIVE FERTILIZER & CHEMICAL CO., NEWARK, N. J.	
1215	Godfrey's 14% Acid Phosphate,	G. B. M. Fry, Muncy,
1812		J. L. Sagers, Westfield,
981	Godfrey's 16% Acid Phosphate,	Equity Co-Operative Exchange, Wellsboro,
1003		C. H. Taylor, Warren,
	GRIFFITH & BOYD COMPANY, BALTIMORE, MD.	
1846	High Grade Acid Phosphate, 14%,	J. F. Hogsett & Son, Uniontown,
1962		S. K. Chambers & Bro., Elkview,
2115		R. M. Arbogast, Winfield,
1128	High Grade 16% Acid Phosphate,	George A. Wolf & Sons, Mt. Wolf,
1151		Willis Herr, Strasburg,
1425		Passmore & Co., Nottingham,
	S. M. HESS & BROTHER, INC., PHILADELPHIA, PA.	
1209	Special High Grade Acid Phosphate,	J. M. Hill, Muncy,
1710		Stow Lumber & Coal Co., Harbor Creek,
2429		Frank Reighand, Bedford,
	THE HUBBARD FERTILIZER CO. OF BALTIMORE CITY, BALTIMORE, MD.	
1584	Hubbard's 14% Phosphate,	E. A. Slagle, Paxinos,
1096	Hubbard's 16% Phosphate,	John Bathgate, State College,
1482		H. S. Bond, Ellenton,
	M. P. HUBBARD & CO., INC., BALTIMORE, MD.	
1244	Hubbard's Soluble Phosphate,	L. A. Geiger, Joanna,
1936		A. M. F. Stiteler, Uwchland,
	INTERNATIONAL AGRICULTURAL CORPORATION (BUFFALO FERTILIZER WORKS), BUFFALO, N. Y.	
1638	Buffalo Dissolved Phosphate,	W. L. Mix, Eldred,
1704		E. L. Smith & Co., Union City,
2593		D. A. Wilson, Sligo,
	THE JARECKI CHEMICAL CO., SANDUSKY, OHIO.	
2529	Acid Phosphate,	John W. Bronson, New Galilee,
1874	C. O. D. Phosphate,	T. A. Hedge Co., Scenery Hill,
	KEYSTONE BONE FERTILIZER COMPANY, PHILADELPHIA, PA.	
2307	Keystone 14% Acid Phosphate,	William Cassel, Hummelstown,
2079	Keystone 16% Acid Phosphate,	John Kreger, Kresgeville,
2362		Fred Rarig, Catawissa,
	THE LANCASTER BONE FERTILIZER COMPANY, LANCASTER, PA.	
2319	Grange Special,	Frank Eckman, Quarryville,
2555		Ira Bechtal, Roaring Springs,
	THE LANCASTER CHEMICAL CO., LANCASTER, PA.	
2317	No. 8 Acid Phosphate,	R. C. Collins, Quarryville,
2316	No. 10 Economist,	R. C. Collins, Quarryville,
2431		Adam Beach, New Enterprise,
916	No. 16 Phosphoric Acid Special,	I. E. Patton, Lancaster,
	LEBANON FERTILIZER WORKS, LEBANON, PA.	
1049	Levan's Acid Phosphate,	Hegins Grange, Hegins,

PHOSPHATE FERTILIZERS.—Continued.

Moisture.	PHOSPHORIC ACID.						Selling price per ton at place of selection.	Chemist's number.
	TOTAL.		AVAILABLE.		INSOLUBLE.			
	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.		
%	%	%	%	%	%	%	$	
7.20	14.92	14.50	14.92	14.00	trace	0.50	16 00 17 00	1215 1812
8.22	17.03	16.50	16.65	16.00	0.38	0.50	21 00 17 00	981 1003
6.07	17.13	15.00	16.36	14.00	0.77	1.00	19 00 15 50 17 00	1846 1962 2115
8.03	17.71	17.00	16.75	16.00	0.96	1.00	16 25 20 00 17 50	1128 1151 1425
7.07	17.45	17.00	16.75	16.00	0.70	1.00	17 65 18 55 17 15	1209 1710 2429
6.35	16.60	15.00	15.90	14.00	0.70	1.00	15 00	1584
11.68	16.95	17.00	16.95	16.00	trace	1.00	------------ 19 00	1096 1482
3.42	15.72	15.50	14.89	14.00	0.83	1.50	------------ 16 00	1244 1936
6.68	17.79	15.00	16.64	14.00	1.15	1.00	17 81 17 50 18 00	1638 1704 2593
11.93	17.22	17.00	16.07	16.00	1.15	1.00	16 28	2529
4.24	16.20	15.00	15.56	14.00	0.64	1.00	25 00	1874
5.77	15.28	15.00	14.20	14.00	1.08	1.00	------------	2307
8.19	17.04	17.00	15.89	16.00	1.15	1.00	17 00 16 50	2079 2362
9.10	17.27	17.00	16.57	16.00	0.70	1.00	------------ ------------	2319 2555
6.77	13.98	------------	*13.05	14.00	0.93	------------	16 00	2317
5.28	11.15	11.00	9.81	10.00	1.34	1.00	17 00	2316
7.24	17.27	17.00	16.38	16.00	0.89	1.00	------------ 17 00	2431 916
8.23	14.68	15.00	13.85	14.00	0.83	1.00	15 00	1049

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*Deficient.

TABLE IV.—ACIDULATED

Chemist's number.	Name of Manufacturer and Brand.	Agent and Place of Sampling.
	LISTER'S AGRICULTURAL CHEMICAL WORKS, NEWARK, N. J.	
2207	Lister's High Grade Acid Phosphate,	J. C. Wiley, Woodbine,
2392	Lister's Soluble Phosphate,	R. K. Yoder, Belleville,
	FREDERICK LUDLAM CO., SUBSIDIARY OF THE AMERICAN AGRICULTURAL CHEMICAL CO., BALTIMORE, MD.	
897	Ludlam's Cecrops Fertilizer Dissolved Phosphate.	Ira S. Fry, Lancaster,
1503		J. T. McConnell, New Germantown,
2627		N. B. Shober, Garret,
1276	Ludlam's Cecrops Fertilizer High Grade Dissolved Phosphate.	E. N. Diehl, Shippensburg,
	THE MARTIN FERTILIZER CO., PHILADELPHIA, PA.	
923	Martin's Acid Phosphate, 15%,	S. Shank, Lancaster,
	THE MILLER FERTILIZER CO., BALTIMORE, MD.	
1211	Acid Phosphate 16%,	H. E. Myers, Muncy,
	NASSAU FERTILIZER CO., SUBSIRIARY OF THE AMERICAN AGRICULTURAL CHEMICAL CO., NEW YORK, N. Y.	
1082	High Grade Superphosphate,	B. J. Crisman, Factoryville,
1113		John Dubbs, Bellefonte,
2432		Henry Brown, Loysburg,
1229	Soluble Phosphate,	Henry S. Lesher, Strausstown,
2451		A. J. Bowser, Mill Creek,
	NITRATE AGENCIES COMPANY, NEW YORK. N. Y.	
918	N. A. C. Brand High Grade Acid Phosphate,	F. C. Evans, Drumore,
1360		Morrow & Buxton, Valencia,
2283		F. P. Bull, Towanda,
	G. OBER & SONS COMPANY, BALTIMORE, MD.	
1532	Ober's Dissolved Phosphate,	C. C. Catherman, Hartleton,
1637		J. H. Duttera, New Oxford,
2625		N. B. Shober, Garret,
1287	Ober's High Grade Acid Phosphate,	J. M. Gray, Elliotsburg,
2397		William Atkinson, McVeytown,
	PATAPSCO GUANO COMPANY, BALTIMORE, MD.	
1639	Battle Ax Phosphate,	J. H. Duttera, New Oxford,
2261		A. B. Myers & Son, Ligonier,
2202	Patapsco 10% Acid Phosphate,	J. P. Schuhart, New Freedom,
2305	Patapsco Dissolved Phosphate,	Joseph Burkholder, Hummelstown,
1280	Patapsco High Grade Acid Phosphate,	Charles Bruner, New Bloomfield,
1564	Patapsco Pure Dissolved S. C. Phosphate,	Charles Shimmel, Ackermanville,
1670		J. H. Duttera, New Oxford,
2373		H. J. Linden, Pottsgrove,
	PIEDMONT MT. AIRY GUANO CO., BALTIMORE, MD.	
1632	Piedmont 12% Acid Phosphate,	H. H. Loose, Menges Mills,
2058		Long & Miller, Liverpool,
2056	Piedmont 14% Acid Phosphate,	Long & Miller, Liverpool,
	PITTSBURGH PROVISION & PACKING CO., PITTSBURGH, PA.	
1353	Acid Phosphate,	George Renton & Co., Castle Shannon,
1885		George B. Sprowls, Claysville,

PHOSPHATE FERTILIZERS.—Continued.

	PHOSPHORIC ACID.						Selling price per ton at place of selection.	Chemist's number.
	TOTAL.		AVAILABLE.		INSOLUBLE.			
Moisture.	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.		
%	%	%	%	%	%	%	$	
7.40	17.40	17.00	16.89	16.00	0.51	1.00	15 50	2207
6.68	14.06	13.00	13.68	12.00	0.38	1.00	16 00	2392
6.05	15.95	15.00	15.25	14.00	0.70	1.00	15 50 17 10 17 00	897 1503 2627
9.61	17.30	17.00	16.51	16.00	0.79	1.00	17 00	1276
8.34	15.45	------------	*15.07	16.00	0.38	----------	17 00	923
7.83	18.45	16.50	17.81	16.00	0.64	0.50	18 00	1211
7.24	17.78	17.00	17.14	16.00	0.64	1.00	20 00 19 00 17 50	1082 1113 2432
7.37	15.49	15.00	14.92	14.00	0.57	1.00	---------- 18 00	1229 2451
7.97	18.46	17.00	17.91	16.00	0.55	1.00	17 00 19 00 15 50	918 1360 2283
7.05	16.61	15.90	15.21	14.00	1.40	1.00	16 86 16 00 17 00	1532 1667 2625
8.73	17.99	17.00	16.52	16.00	1.47	1.00	17 50 19 00	1287 2397
5.51	13.34	13.00	12.57	12.00	0.77	1.00	17 50 20 00	1639 2261
4.46	11.21	11.00	10.61	10.00	0.51	1.00	13 00	2202
10.09	18.02	19.00	17.96	18.00	0.06	1.00	20 00	2305
8.23	17.72	17.00	17.34	16.00	0.38	1.00	18 50	1280
6.40	15.17	15.00	14.47	14.00	0.70	1.00	18 00 18 50 ----------	1564 1670 2373
5.01	13.59	------------	13.21	12.00	0.38	----------	14 00 14 30	1662 2058
6.56	17.64	------------	16.62	14.00	1,02	----------	15 10	2056
3.15	13.13	12.00	12.56	11.00	0.57	1.00	24 00 21 00	1353 1885

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*Deficient.

TABLE IV.—ACIDULATED

Chemist's number.	Name of Manufacturer and Brand.	Agent and Place of Sampling.
	THE POLLOCK FERTILIZER COMPANY, SUBSIDIARY OF THE AMERICAN AGRICULTURAL CHEMICAL CO., BALTIMORE, MD.	
911	Dissolved S. C. Phosphate,	J. G. Hall, New Providence,
2621		A. O. Beal, Sand Patch,
1100	High Grade Superphosphate,	E. C. Ross, Lemont,
1324		Irvine Earnest, Wolfsburg,
2330		John H. Hicks, Avondale,
1292	Magic Phosphate,	James H. Rice, Alinda,
1677		J. A. Cashman, New Oxford,
2448		R. N. McCarl & Son, Mapleton Depot,
	RASIN-MONUMENTAL COMPANY, BALTIMORE, MD.	
1454	Rasin's Acid Phosphate,	E. H. Keen & Co., Parkesburg,
1529		F. W. Archey, Penna. Furnace,
1620		Leonard Ritter, St. Marys,
1990	Rasin's 16% Acid Phosphate,	Oliver Uhler, Easton,
935	Rasin's Seawall Special,	J. D. Markle, Hanover,
	READING BONE FERTILIZER CO., READING, PA.	
1556	14% Clear Acid Phosphate,	W. K. Moore, Macungie,
2233		A. H. Yocum, Catawissa,
1086	16% Clear Acid Phosphate,	R. E. Ransam, Honesdale,
1858		Jos. W. Dague, West Brownsville,
2523		Andrew Moore, Enon Valley,
	READING CHEMICAL COMPANY, READING, PA.	
2182	High Grade Acid Phosphate,	Charles Frazier, Clintondale,
2223		W. W. Parker, Rohrsburg,
2453		George W. Berganty, Huntingdon,
1621	Reading Clear Acid Phosphate,	Leonard Ritter, St. Marys,
	F. S. ROYSTER GUANO COMPANY, BALTIMORE, MD.	
1872	Royster's 12% Acid Phosphate,	C. C. Davis, Greensboro,
2217	Royster's 14% Acid Phosphate,	P. L. Eves, Millville,
2337		George McKissick, Parkersford,
2538		H. L. Stultz & Son, Hollidaysburg,
978	Royster's High Grade 16% Acid Phosphate,	Roy J. Dunham, Wellsboro,
1256		George Boyer, Pine Grove,
1599		R. P. Brown, Utica,
	THE SCOTT FERTILIZER COMPANY, ELKTON, MD.	
2347	Scott's Tip Top Soluble Phosphate,	Mackey & Yerkes, Oxford,
	THE SUPERIOR GUANO COMPANY, BALTIMORE, MD.	
2442	14% Acid Phosphate,	Huston Brothers, Three Springs,
2653		W. E. & D. B. Specht, Cantner,
2443	16% Acid Phosphate,	Huston Brothers, Three Springs,
2650		C. E. Schmucker, Friedens,
	SWACKS FERTILIZER WORKS, INC., DU BOIS, PA.	
1719	Acid Phosphate 16%, 1917,	W. H. Kaufman, Harmony,
2517		John W. White, Jamestown,
1626	Lime Phosphate, 1917,	C. Greg, Ridgway,

PHOSPHATE FERTILIZERS.—Continued.

Moisture.	PHOSPHORIC ACID.						Selling price per ton at place of selection.	Chemist's number.
	TOTAL.		AVAILABLE.		INSOLUBLE.			
	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.		
%	%	%	%	%	%	%	$	
7.24	15.41	15.00	14.56	14.00	0.85	1.00	16 00	911
							20 00	2621
							17 00	1100
8.77	17.40	17.00	17.14	16.00	0.23	1.00	17 50	1324
							16 00	2330
							14 50	1292
7.00	12.02	11.00	11.45	10.00	0.57	1.00	13 50	1677
							15 00	2448
							16 00	1454
3.94	16.00	15.00	14.85	14.00	1.15	1.00	16 25	1529
							19 00	1620
9.19	17.73	17.00	16.01	16.00	1.72	1.00	16 50	1990
6.63	13.70	11.00	12.49	10.00	1.21	1.00	15 50	935
5.17	15.23	15.00	14.08	14.00	1.15	1.00	18 00	1556
							16 00	2233
							17 15	1086
7.60	17.86	17.00	17.22	16.00	0.64	1.00	19 00	1858
							17 35	2523
							16 00	2182
7.12	17.78	17.00	17.08	16.00	0.70	1.00	18 00	2223
								2453
7.89	14.99	15.00	14.54	14.00	0.45	1.00	19 00	1621
6.42	13.71	12.50	12.63	12.00	1.08	0.50	17 00	1872
							18 50	2217
5.54	15.60	14.50	14.67	14.00	1.02	0.50	18 00	2337
							17 00	2538
							21 50	978
7.50	17.30	16.50	16.22	16.00	1.08	0.50		1256
							19 00	1599
11.73	16.68	------------	16.23	16.00	0.45	------------	18 00	2347
3.50	15.51	14.50	14.17	14.00	1.34	0.50	16 50	2442
							17 00	2653
6.42	17.20	17.00	16.82	16.00	0.38	1.00	17 50	2443
							18 00	2650
6.61	18.42	17.00	17.40	16.00	1.02	1.00	18 00	1719
							18 00	2517
1.40	9.26	9.00	*7.79	8.00	1.47	1.00	20 00	1626

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*Deficient.

TABLE IV.—ACIDULATED

Chemist's number.	Name of Manufacturer and Brand.	Agent and Place of Sampling.
	SWIFT & COMPANY, INC., BALTIMORE, MD.	
1910	Garden City Phosphate,	H. C. Snowden, Jr., Media,
2229		H. B. Low & Son, Orangeville,
1011	High Grade Acid Phosphate,	Albert Dewing, Warrenham,
1673		J. R. Weaver, New Oxford,
2511		Charles L. Beckman, Fairview,
	I. P. THOMAS & SON CO., PHILADELPHIA, PA.	
1654	16% Acid Phosphate,	A. Harbold, Dillsburg,
2302		M. A. Weik, Kleinfeltersville,
2515		Greenville Coal & Ice Co., Greenville,
1511	S. C. Phosphate,	J. C. Whistler, Newville,
	TUSCARORA FERTILIZER CO., BALTIMORE, MD.	
2605	Acid Phosphate, 14%,	A. M. Frederick, Jr., Fairchance,
2008	Acid Phosphate, 16%,	Alfred Litchard, Turbotville,
2387		H. T. McDowell, Howard,
	THE J. E. TYGERT COMPANY, BY THE AMERICAN AGRICULTURAL CHEMICAL CO., PHILADELPHIA, PA.	
1794	14% Acid Phosphate,	S. C. Donley, Montrose,
1220	16% Acid Phosphate,	Gheen, Spigelmyer & Phleger, Antes Fort,
1791		Worth Jennings, Towanda,
1823		Alanson Kinney, Port Allegany,
	WARREN FERTILIZER CO., WARREN, PA.	
2478	Warren Soluble Phosphate 16%,	Pickett Hardware Co., Warren,
	WASHINGTON, ALEXANDER & COOKE COMPANY, CHARLESTOWN, W. VA.	
901	W. A. & C's. Acid Phosphate,	Albert Herr, Quarryville,
1680		E. S. Kelly, Gettysburg,
902	W. A. & C's. Super Phosphate,	Albert Herr, Quarryville,
1681		E. S. Kellly, Gettysburg,
	THE ROBERT A. WOOLDRIDGE COMPANY, BALTIMORE, MD.	
1320	Wooldridge's Florida Acid Phosphate,	V. A. Stufft, Imler,
2291		William F. Kreiser, Lickdale,
2560		Cresson State Sanitarium, Cresson,
1533	Wooldridge's High Grade Acid Phosphate,	C. C. Catherman, Hartleton,
	YORK CHEMICAL WORKS, YORK, PA.	
920	Dempwolf's Superphosphate,	Brown & Rea, Peach Bottom,
1833		York Chemical Works, York,
2639		H. E. Barkman, Rockwood,
1102	Dempwolf's Dissolved Phosphate,	E. C. Musser, State College,
2185		A. T. Baird, Lock Haven,
		Average,

PHOSPHATE FERTILIZERS.—Concluded.

Moisture.	PHOSPHORIC ACID.						Selling price per ton at place of selection.	Chemist's number.
	TOTAL.		AVAILABLE.		INSOLUBLE.			
	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.		
3.93	15.58	------	14.69	14.00	0.89	------	17 00	1910
							16 25	2229
4.30	16.79	------	*15.71	16.00	1.08	------	17 50	1011
							18 00	1673
							18 50	2511
7.31	18.74	16.50	17.34	16.00	1.40	0.50	18 00	1654
							18 75	2302
							20 00	2515
5.57	13.85	14.50	*13.47	14.00	0.38	0.50	15 00	1511
3.12	16.21	14.50	14.30	14.00	1.91	0.50	20 00	2605
5.63	18.14	16.50	17.06	16.00	1.08	0.50	15 75	2008
							18 50	2387
8.68	14.53	15.00	*13.76	14.00	0.77	1.00	15 50	1794
5.15	17.39	17.00	16.56	16.00	0.83	1.00	19 00	1220
							17 00	1791
							20 50	1823
7.50	16.54	------	16.54	16.00	trace	------	22 00	2478
6.06	16.26	15.00	15.56	14.00	0.70	1.00	13 25	901
							16 00	1680
8.54	17.59	17.00	16.44	16.00	1.15	1.00	16 40	902
							17 00	1681
6.52	16.14	15.00	15.76	14.00	0.38	1.00	------	1320
							------	2291
							------	2560
7.12	17.54	17.00	17.35	16.00	0.19	1.00	17 86	1533
6.68	17.90	16.50	16.88	16.00	1.02	0.50	17 00	920
							17 50	1833
							17 00	2639
5.23	17.14	14.50	15.74	14.00	1.40	0.50	16 50	1102
							15 00	2185
6.64	16.38	------	15.57	------	0.83	------	17 56	------

*Deficient.

TABLE NO. V.—ROCK AND

Furnishing Phosphoric

Chemist's number.	Name of Manufacturer and Brand.	Agent and Place of Sampling.
	BERGER BROTHERS, EASTON, PA.	
1988	Potato and Truck Special 1916,	Osterstock Hardware Co., Easton,
	CONSUMERS CHEMICAL CORPORATION, NEW YORK, N. Y.	
1093	Consumer's Pure Sure Potash Mixture,	Murray & Co., Honesdale,
	KOLLER FERTILIZER CO., SEITZLAND, PA.	
2197	Special Phosphate,	Summit Lumber Co., New Freedom,
	SUPERIOR GUANO CO., BALTIMORE, MD.	
2662	Special Mixture,	Weaver & Berkey, Windber,
		Average,

POTASH FERTILIZERS.

Acid and Potash.

Moisture.	PHOSPHORIC ACID.						POTASH.				Selling price per ton at place of selection.	Chemist's number.
	Total.		Available.		Insoluble.							
	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.	Present as muriate.	Present as sulphate.		
%	%	%	%	%	%	%	%	%	%	%	$	
10.25	10.66	9.00	9.51	8.00	1.15	1.00	1.12	1.00	1.12	--------	35 00	1988
5.48	11.93	11.00	11.04	10.00	0.89	1.00	1.30	1.00	1.30	--------	22 80	1093
10.79	10.55	--------	9.27	7.00	1.28	------	*1.91	3.00	1.91	--------	24 00	2197
9.55	10.32	9.00	*7.39	8.00	2.93	1.00	*1.15	1.50	1.15	--------	21 00	2662
9.01	10.87	--------	9.30	--------	1.56	------	1.37	--------	--------	--------	25 70	--------

*Deficient.

TABLE NO. VI.—MISCELL

Chemist's number.	Name of Manufacturer and Brand.	Agent and Place of Sampling.	Moisture.
	ALPHANO HUMUS CO., NEW YORK, N. Y.		
1233 2438	Alphano Humus,	Jare H. Barr, Sinking Springs, Charles V. Dibert, Bedford,	36.55
	THE AMERICAN AGRICULTURAL CHEMICAL CO., NEW YORK, N. Y.		
1421 2087 2556	Ground Tankage 6-30,	H. P. Passmore & Bro., Oxford, Bradley Brothers, Peach Bottom, Aaron Stern, Roaring Springs,	11.94
1371 2668	Phospho Plaster,	Farmers Supply Co., Ariel, George Spangenberg, East Stroudsburg.	3.45
	THE AMERICAN REDUCTION CO., PITTSBURGH, PA.		
1854	Ground Garbage Tankage,	G. H. Swearingen, Dunbar,	4.42
	BAUGH & SONS CO., PHILADELPHIA, PA.		
1751	Nitrate of Soda,	N. F. Reed, New Cumberland,	1.77
	LAKELAND PHOSPHATE CO., LAKELAND, FLORIDA.		
2326	Natursown Pulverized High Grade Phosphate.	Sprecher & Ganss, Lancaster,	0.51
	LEBANON FERTILIZER WORKS, LEBANON, PA.		
1250 1391	Levan's Animal Tankage,	Horace Kinsey, Pine Grove, L. W. Mumma, Jr., Florin,	7.95
	LISTERS AGRICULTURAL CHEMICAL WORKS.		
2425	Lister's Ground Tankage,	William L. Fehn, Pine Grove,	8.52
	NITRATE AGENCIES CO., NEW YORK, N. Y.		
919	N. A. C. Brand High Grade Tankage,	T. C. Evans, Drumore,	8.47
1733	N. A. C. Natural Humus,	J. G. & W. Campbell, Butler,	19.00
1235 1361 2027	N. A. C. Brand Nitrate of Soda,	State Insane Asylum, Wernersville, Morrow & Buxton, Valencia, H. C. Brinton, Hanover,	1.16

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a=3/5 or more, b=2/5 to 3/5, c=2/5 or less of active insoluble nitrogen.

ANEOUS FERTILIZERS.

NITROGEN.					PHOSPHORIC ACID.					POTASH.		Selling price per ton at place of selection.	Chemist's number.
Total.			Insoluble.		Total.		Available.						
Found.	Guaranteed.	Water soluble.	Active.	Inactive.	Found.	Guaranteed.	Found.	Guaranteed.	Insoluble.	Found.	Guaranteed.		
%	%	%	%	%	%	%	%	%	%	%	%	$	
1.70	1.25	0.25	b0.59	0.86	1.14	0.50	------	------	------	†0.34	0.50	------ ------	1233 2438
5.24	4.94	1.47	a2.26	1.51	16.16	13.73	------	------	------	------	------	37 00 36 00 35 00	1421 2087 2556
------	------	------	------	------	4.27	------	2.61	2.00	1.66	------	------	11 00 ------	1371 2668
2.76	2.05	1.22	c0.46	1.08	2.81	2.25	------	------	------	------	------	25 00	1854
16.24	15.23	------	------	------	------	------	------	------	------	------	------	78 00	1751
------	------	------	------	------	32.21	32.00	------	------	------	------	------	14 87	2326
4.97	4.94	1.58	b1.57	1.82	*8.50	9.00	------	------	------	------	------	33 00 36 50	1250 1391
5.79	4.94	1.58	b2.25	1.96	*12.73	13.73	------	------	------	------	------	------	2425
5.90	5.75	1.47	b2.60	1.83	12.69	6.86	------	------	------	------	------	42 00	919
2.96	1.64	0.11	c1.13	1.72	0.32	------	*0.13	0.43	0.19	*0.40	0.53	80 00	1733
16.36	15.00	------	------	------	------	------	------	------	------	------	------	------ 80 00 80 00	1235 1361 2027

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†No. 1233 As sulphate 0.34%.
*Deficient.

TABLE VI.—MISCELLANEOUS

Chemist's number.	Name of Manufacturer and Brand.	Agent and Place of Sampling.	Moisture.
	PITTSBURGH PROVISION AND PACKING CO., PITTSBURGH, PA.		
1352	Pure Bone and Meat,	George Renton & Co., Castle Shannon.	5.47
	READING BONE FERTILIZER CO., READING, PA.		
1236	Animal Tankage,	State Insane Asylum, Wernersville,	16.84
1070	Nitrate of Soda,	Arthur Snyder, Jermyn,	0.15
	ROBERT A. REICHARD, ALLENTOWN, PA.		
2143	Animal Tankage,	N. D. Hunsicker, Snyders,	6.33
	I. P. THOMAS & SON CO., PHILADELPHIA, PA.		
2151	Nitrate of Soda,	W. W. Brace, Dallas,	1.81
	TUSCARORA FERTILIZER CO., BALTIMORE, MD.		
2243	Ground Tankage,	William Gates Estate, Kittanning,	6.35
	YORK CHEMICAL WORKS, YORK, PA.		
1138	Dempwolf's High Grade Tankage,	Dover Farmers Association, Dover,	6.93

a=3/5 or more, b=2/5 to 3/5, c=2/5 or less of active insoluble nitrogen.

FERTILIZERS.—Concluded.

NITROGEN.					PHOSPHORIC ACID.					POTASH.		Selling price per ton at place of selection.	Chemist's number.
Total.			Insoluble.		Total.		Available.						
Found.	Guaranteed.	Water soluble.	Active.	Inactive.	Found.	Guaranteed.	Found.	Guaranteed.	Insoluble.	Found.	Guaranteed.		
%	%	%	%	%	%	%	%	%	%	%	%	$	
4.92	4.93	0.18	b2.26	2.48	9.93	8.00	------	------	------	------	------	32 00	1352
*4.82	5.75	1.73	a2.19	0.90	13.28	9.00	------	------	------	------	------	------	1236
16.60	15.00	------	------	------	------	------	------	------	------	------	------	80 00	1070
7.55	5.75	1.02	b3.68	2.85	*9.46	11.44	------	------	------	------	------	41 00	2143
16.20	15.21	------	------	------	------	------	------	------	------	------	------	72 00	2151
*6.30	6.58	2.55	b1.96	1.79	9.39	9.16	------	------	------	------	------	45 00	2243
6.56	6.58	1.47	a3.70	1.39	10.10	10.00	------	------	------	------	------	42 00	1138

*Deficient.